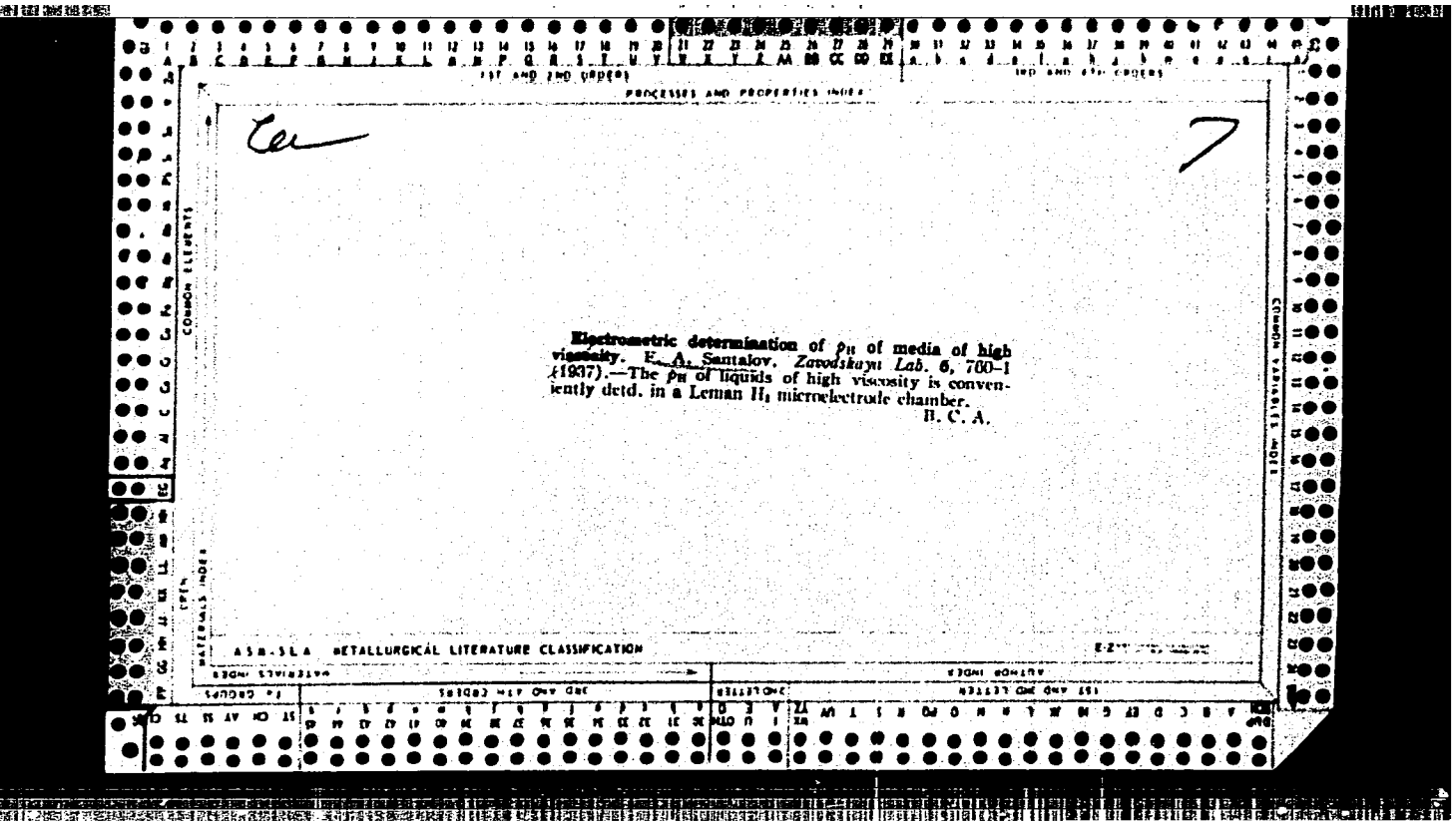
"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6



Electrometric determination of p_H of media of high viscosity. E. A. Santalov. *Zavodskaya Lab.* **6**, 760–1 (1937).—The p_H of liquids of high viscosity is conveniently detd. in a Leman H_2 microelectrode chamber.
B. C. A.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

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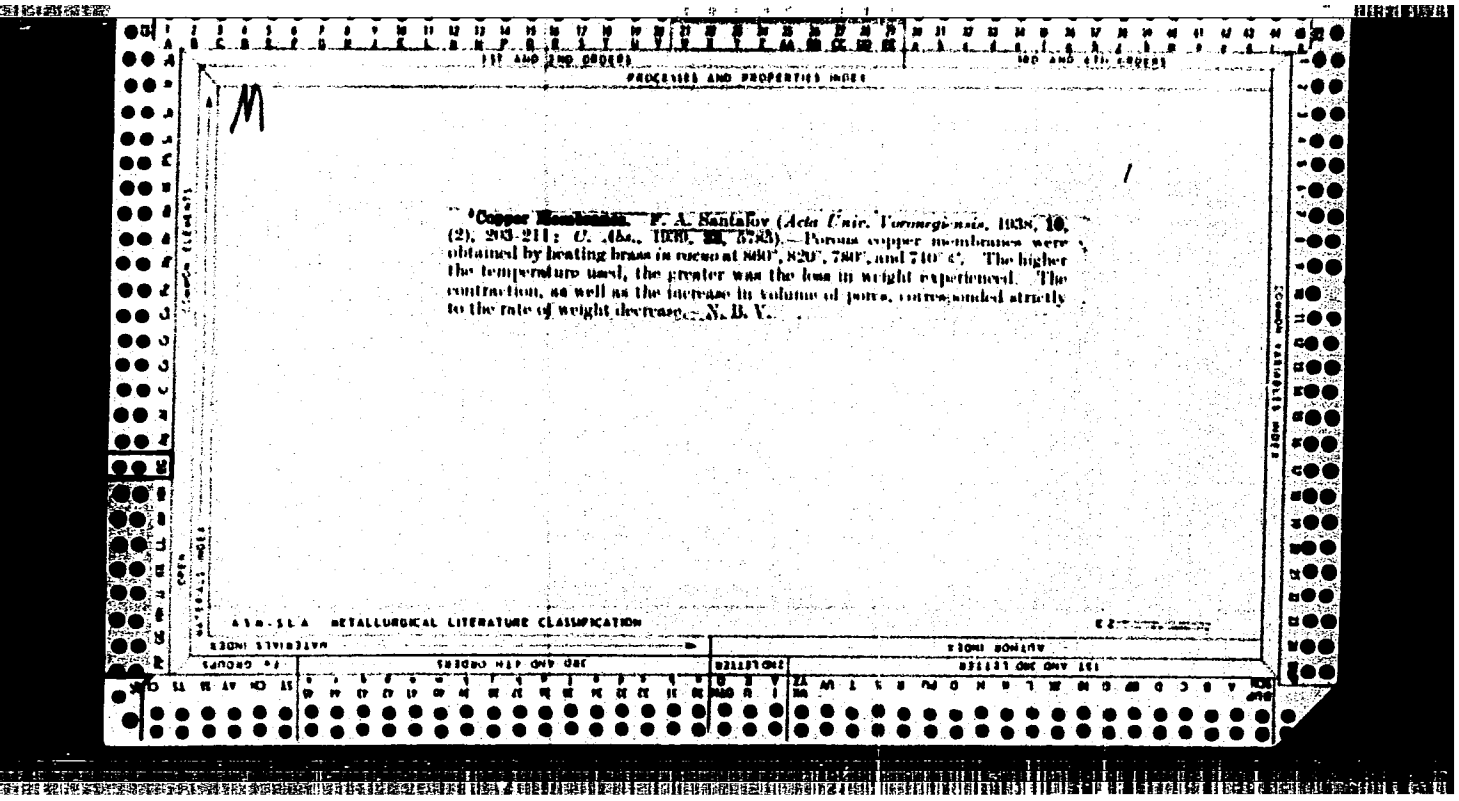

Copper [redacted] V. A. Santalov (*Acta Univ. Voronegiensis*, 1938, **10**, (2), 203-211; *C. Abs.*, 1939, **33**, 8783).—Porous copper membranes were obtained by heating brass in vacuo at 860°, 820°, 780°, and 740° C. The higher the temperature used, the greater was the loss in weight experienced. The contraction, as well as the increase in volume of pores, corresponded strictly to the rate of weight decrease.—N. B. V.

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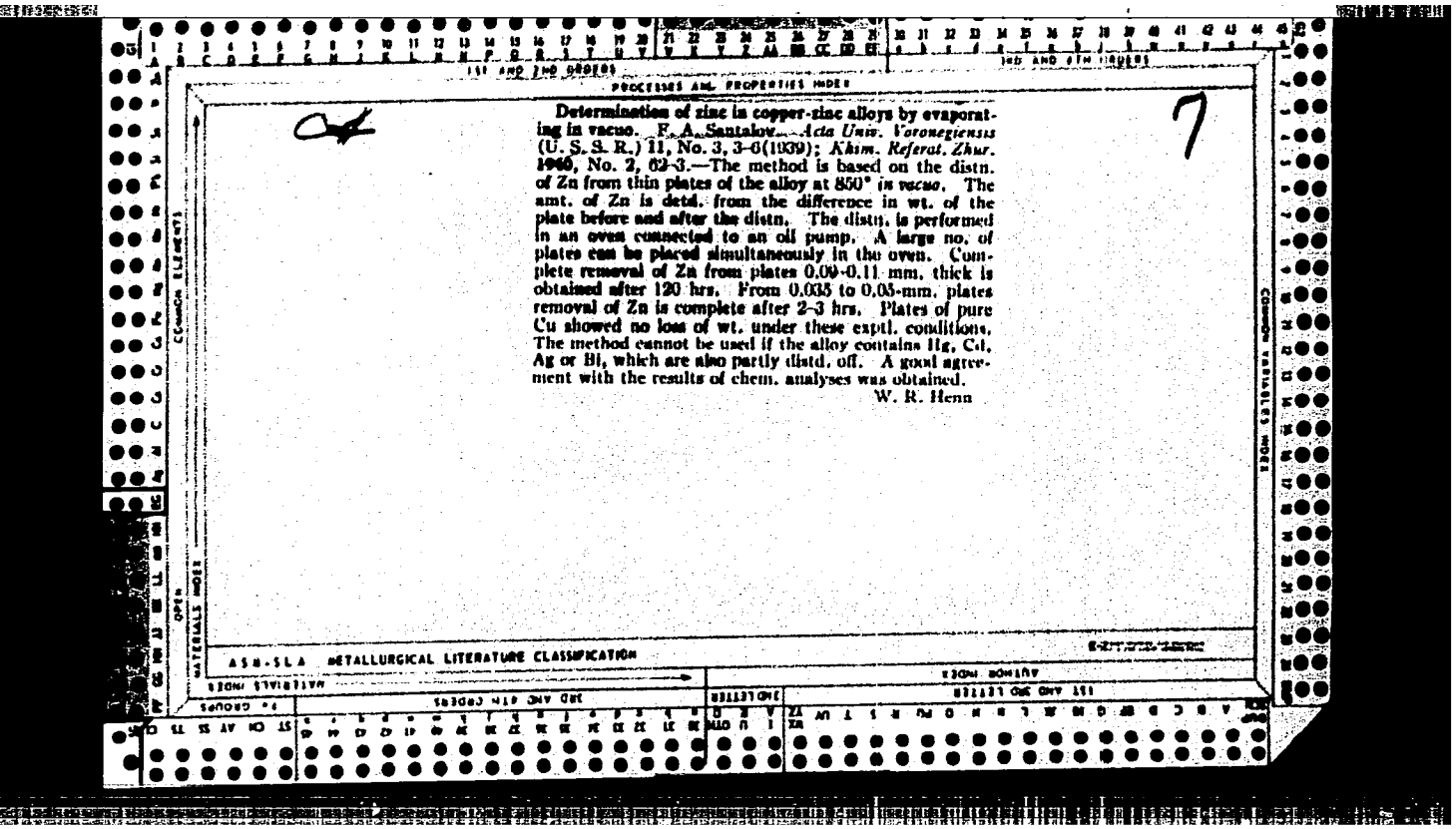

PROCESSES AND PROPERTIES INDEX

Determination of zinc in copper-zinc alloys by evaporating in vacuo. F. A. Santalov. *Acta Univ. Voronegiensis* (U. S. S. R.) 11, No. 3, 3-6(1939); *Khim. Referat. Zhur.* **1940**, No. 2, 62-3.—The method is based on the distn. of Zn from thin plates of the alloy at 850° *in vacuo*. The amt. of Zn is detd. from the difference in wt. of the plate before and after the distn. The distn. is performed in an oven connected to an oil pump. A large no. of plates can be placed simultaneously in the oven. Complete removal of Zn from plates 0.09-0.11 mm. thick is obtained after 120 hrs. From 0.033 to 0.05-mm. plates removal of Zn is complete after 2-3 hrs. Plates of pure Cu showed no loss of wt. under these exptl. conditions. The method cannot be used if the alloy contains Hg, Cd, Ag or Bi, which are also partly distd. off. A good agreement with the results of chem. analyses was obtained.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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MA

1

Silver Membranes. F. A. Santalov (*Zhur. Fizich. Khimii* (*J. Phys. Chem.*), 1941, **15**, 807–810; *C. Abs.*, 1942, **36**, 5405).—[In Russian.] Porous silver membranes were obtained by evaporation of the zinc from silver–zinc solid-solution sheets containing 25–27% zinc, in a 0·1-mm. mercury vacuum at temperatures up to 700° C. The rate of evaporation as a function of sheet thickness and the pore structure is shown in 3 figs. and 2 tables. The decrease in volume varies from 0·5% for a 0·92-mm. sheet to 31% for a 0·035-mm. sheet; the pore diameters decrease from 0·4 to 2·2 μ, respectively.

1943

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOV, F.A.

Santalov, F.A. "On the problem of determining the coefficients of diffusion of metals by evaporation in vacuo," (reference), Soobshch. o nauch. rabotakh chlenov Vsesoyuz. khim. o-va im. Mendeleyeva, 1948, Issue 2, p. 31-32

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

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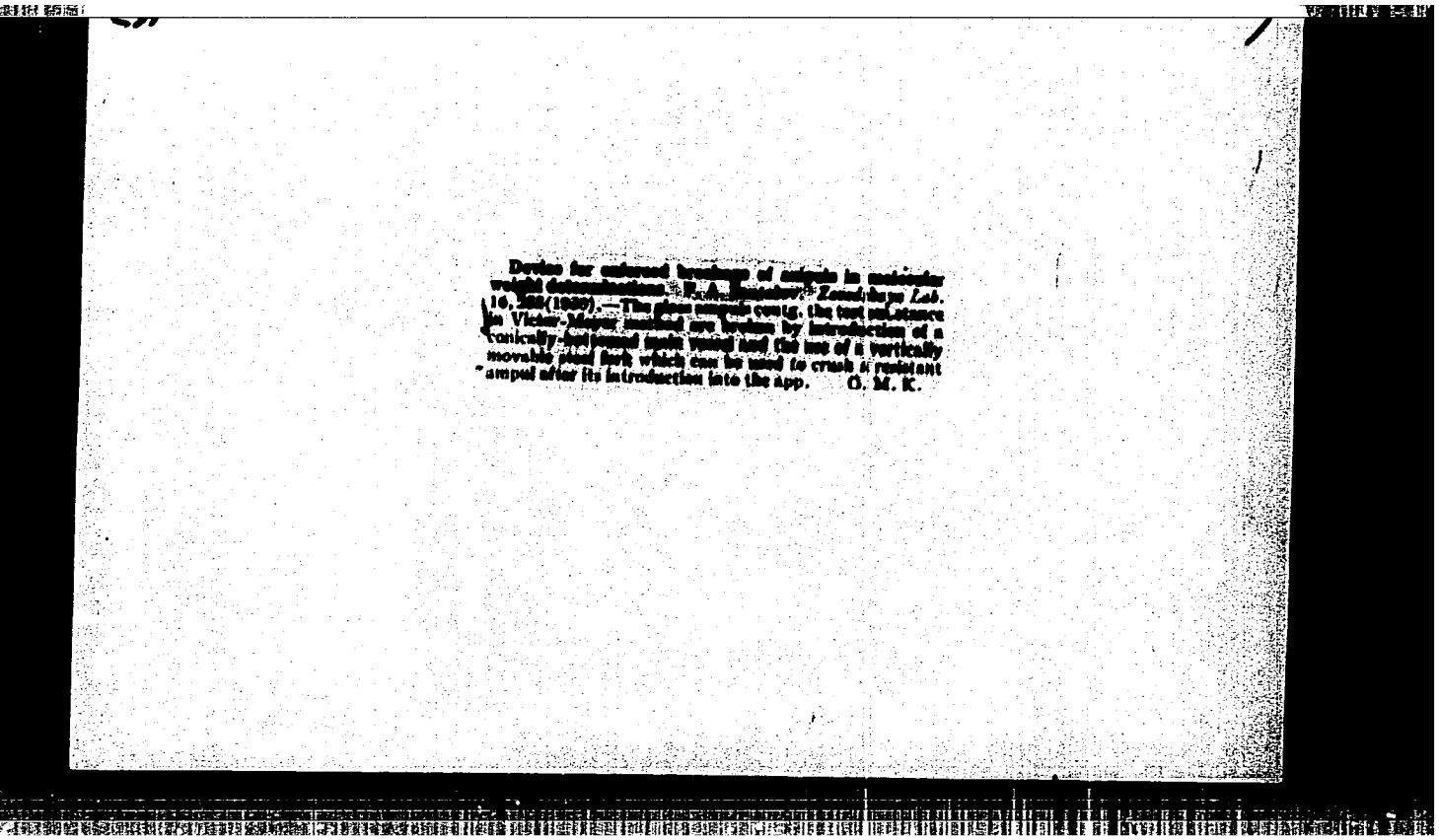

Device for enhanced breaking of ampuls in molecular weight determinations. R. A. Rosenberg. *Zentralbl. Lab.* 10, 288(1939).—The glass ampuls contg. the test substance in Victor-Meyer molecular wt. tubes by introduction of a conically-fashioned sealing rod and the use of a vertically movable steel fork which can be used to crush a resistant ampul after its introduction into the app. C. M. K.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOV, F. A.

PA 164T52

USSR/Physics - Pores
Alloys

May 50

"Pore Formation and Its Influence Upon the Speed of Elimination of the Volatile Component of a Solid Alloy," F. A. Santalov

"Zhur Tekh Fiz" Vol XX, No 5, pp 564-570

Studies speed of evaporation of volatile component of Ag-Zn, Ag-Cd, and Cu-Zn alloys. Shows complete elimination of volatile component is attained more rapidly the greater the volatile component in an alloy. This elimination is connected with recrystallization, compression, and pore formation. Submitted 10 Dec 49.

164T52

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

1. SANTALOV, F. A.: TIMOVA, V. A.

2. USSR (600)

4. Silver-Zinc Alloys

7. Microstructure and formation of pores of cylindrical forms of silver-zinc alloys during the distillation of zinc. Zhur. tekh. fiz. 22 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOV, F.A.

Effect of fusible metal additives on the elimination rate of the volatile constituents from solid solutions and on the structure of specimens. Fiz. met. i metalloved. 3 no.2:247-253 '56. (MLRA 9:11)

1. Donetskiy industrial'nyy institut imeni N.S. Khrushcheva.
(Silver-cadmium alloys--Metallography)
(Silver-zinc alloys--Metallography)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

18.1280
18.7530

67715

AUTHOR: Santalov, F. A. SOV/126-7-3-11/44

TITLE: On the Speed of Evaporation and Pore Formation During Removal of the Volatile Component from Monocrystals and Polycrystalline Alloy Specimens. I. (O skorosti isparenlya i poroobrazovanii pri otgonke letuchego komponenta iz monokristallov i polikristallicheskikh obraztsov splavov. I)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 3, pp 378-383 (USSR)

ABSTRACT: The evaporation of the volatile component from solid solutions is a complex process, the simple factors of which are:
(1) evaporation of the volatile components from the surface layer;
(2) diffusion of the evaporating component to the evaporation surface;
(3) migration of non-volatile component atoms in the opposite direction to the "vacant" positions, as the volatile component atoms leave;
(4) coagulation of the vacancies and formation of pores;
(5) re-crystallization.

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SOV/126-7-3-11/44

On the Speed of Evaporation and Pore Formation During Removal of the Volatile Component from Monocrystals and Polycrystalline Alloy Specimens.

The influence of the alloy structure on the speed of evaporation of zinc and cadmium from their respective solid solutions in silver has not been studied. An investigation of the speed of evaporation of the volatile component from such solid solutions and phenomena occurring thereby would elucidate certain problems, fundamental for the understanding of the solid state, regarding the change in the crystal lattice of solid bodies. Silver was purified as follows: silver alloys in the form of shavings and filings were dissolved in concentrated nitric acid. The solution was diluted, filtered and silver precipitated as chloride. The latter was washed by decantation for the removal of copper ions. The chloride was reduced to metallic silver by metallic zinc in a weak sulphuric acid solution. After complete reduction the filtrate was removed, the precipitate was transferred to a large porcelain basin and boiled in 2 N hydrochloric acid. The washed silver precipitate was dried and melted under a layer of soot. The silver thus obtained was electrolytically redeposited three times. Cadmium was separated by electrolysis from chemically pure

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

On the Speed of Evaporation and Pore Formation During Removal of the Volatile Component from Monocrystals and Polycrystalline Alloy Specimens.

acid cadmium sulphate and was then sublimated in vacuum. Chemically pure zinc was sublimated in vacuum and underwent zone melting treatment. The alloys were made in a small electric resistance furnace in a quartz container under a soot layer. First, zinc (cadmium) was melted, and then silver was added in portions. The molten alloy was mixed with a quartz stirrer. From the alloy a billet was made. In growing monocrystals of copper-zinc, silver-zinc and silver-cadmium alloys certain difficulties arise in connection with the fact that the saturated vapour pressures of the components are different at a given temperature. Lengthy exposure to high temperature (50° above the melting point of the alloy) leads to a considerable loss in the volatile constituent and to a non-uniformity of the ingot (distribution of the volatile constituent along the length). The following method was adopted for growing monocrystals (see Fig.1). The billet, 2, was placed in the container for growing, 1, and sealed by a graphite

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

On the Speed of Evaporation and Pore Formation During Removal of the Volatile Component from Monocrystals and Polycrystalline Alloy Specimens.

stopper, 3. The clearance between the stopper and the container wall was blocked by a mixture of refractory clay with asbestos, 4, and a layer of soot, 5, was placed on top of the graphite stopper. Then a cylindrical specimen of an alloy of the same metals but richer in the volatile constituent was placed on top of the graphite stopper, 6. The alloy was covered by a second graphite stopper, 7, a layer of soot, 8, and a porcelain stopper, 9, surrounded by refractory clay, 10. The homogeneity of monocrystals with regard to distribution of the volatile constituent was investigated as follows. Shavings were collected separately from each groove, а, б, в, г, д, е, ж (Fig.2) and the silver content of each shaving was determined. It was between 79.38 and 79.63 %. The cylindrical monocrystal of the alloy was made into a cylindrical specimen approximately 5 mm long. It was emery papered, and the specimens were separated. After short heat treatment at 650°C and recrystallization of the deformed surface layer, each specimen was found to be covered by polycrystalline "fur". This was removed by emery papering and etching, and the specimens were studied under the microscope. It was found

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

On the Speed of Evaporation and Pore Formation During Removal of the Volatile Component from Monocrystals and Polycrystalline Alloy Specimens.

that by cutting the specimen deformation approximately 0.2 - 0.25 mm deep was brought about. In order to study the speed of evaporation of the vapour of specimens (for mono- and polycrystals) of identical composition the specimens were placed in a quartz tube in which a vacuum of 10^{-4} mm was maintained. Evaporation was carried out at the constant temperature of 655 $\pm$1°C for 5 minutes, and at 665 $\pm$ 0.5°C for another 25 minutes. In the table on p 381 characteristics of the original specimens and the average evaporation speeds are shown. Fig.3 shows the microstructure of the cross-section perpendicular to the axis of the cylindrical specimen of a silver-zinc alloy monocrystal after evaporation of zinc. As a result of the above experiments the author arrived at the following conclusions. Under identical conditions, the evaporation speed of the volatile constituent from monocrystals and polycrystalline specimens of the same composition is practically identical. The evaporation speed of zinc

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SOV/126-7-3-11/44

On the Speed of Evaporation and Pore Formation During Removal of the Volatile Component from Monocrystals and Polycrystalline Alloy Specimens.

from monocrystals of a silver-zinc alloy is 10 - 12% greater than from polycrystalline specimens of the same composition. In the removal of zinc from monocrystals of a silver-zinc alloy the anisotropy of void dendride formation becomes clearly apparent. In this case the void dendrides are straight channels lying in the cleavage plane. After partial removal of cadmium from monocrystals of a silver-cadmium alloy scattered, weakly developed void dendrides can be seen in the specimen. It appears that the conditions of vacancy coagulation here are such that isolated voids are formed. There are 4 figures, 1 table and 8 references, of which 7 (including 1 translation) are Soviet and 1 German.

ASSOCIATION: Donetskiy Ordena Trudovogo Krasnogo znameni industrial'nyy institut (Donets Industrial Institute of the Order of the Red Banner of Labor)

SUBMITTED: June 1, 1957; after revision, October 30, 1957.

4

Card 6/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOV, F.A.

Speed of vaporization and porosity formation in the distillation of zinc from polycrystalline and single crystal specimens of alpha-hard solutions of zinc in silver. Izv. vys. ucheb. zav.; tsvet. met. 3 no.3:143-147 '60. (MIRA 14:3)

1. Donetskiy industrial'nyy institut, Kafedra fizicheskoy khimii.
(Zinc-silver alloys—Metallurgy)
(Vapor—Liquid equilibrium)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

S/137/63/000/001/012/019
A006/A101

AUTHOR: Santalov, F. A.

TITLE: On diffusion porosity in α-solid solutions of Ag-Zn

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1963, 4, abstract 1I17 ("Tr. Donetsk. politekhn. in-ta", 1961, 53, 95 - 97)

TEXT: The investigation was made with Ag-Zn alloys (21.50 - 23.11% Zn) containing <0.002% admixtures. Cylindrical specimens, 7 mm in diameter and height, were cut out on a lathe from the center of poly- and single-crystal samples. Driving-off the Zn was conducted in a vacuum by heating the specimens up to 650°C during 3.5 hours. Zn was removed merely from the surface layer. Differently from the results obtained by Reznik and Seygl (RZhMet, 1957, no. 8, 15700) from investigating pore formation in α-brass, a difference was not observed in the porosity and structure of specimens of Ag-Zn alloy α-solid solutions, prepared under different conditions. It is supposed that the formation and development of pores in the α-solid solution is not connected with the presence of ZnO particles or other solid substances in the alloy.
[Abstracter's note: Complete translation] V. Srednogorska

Card 1/1

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

L 17082-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3004595 S/0126/63/016/001/0080/0085

AUTHOR: Santalov, F. A.

TITLE: Formation of pores during elimination of volatile components from alpha-solid solution

SOURCE: Fizika metallov i metallovedeniye, v. 16, no. 1, 1963, 80-85

TOPIC TAGS: solid solution, porosity, volatile component

ABSTRACT: The formation of pores in Cu-Zn, Ag-Cd, Ag-Zn solutions during the elimination of volatile components was studied. Each of the binary alloys was prepared in three ways: 1) in argon atmosphere; 2) in an open tube under a layer of soot; and 3) the same as in 2), but with the addition of 0.3% tungstic acid. After the elimination of the volatile components (in vacuum) the volume of the sample and the volume of connected and unconnected voids were determined. It was established that pores in the Cu-Zn and Ag-Cd samples were distributed uniformly through the volume. The sample formed a solid foam with isolated voids of uniform sizes. It seems the particles of foreign matter in these alloys act as the centers of coalescence for the vacancies. The formation of pores in the

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

L 17082-63
ACCESSION NR: AP3004595

Ag-Zn alloy did not depend on the mode of alloy preparation. The sample was covered by a net of open voids, each representing in shape a solitary microbody on a skeleton of three mutually perpendicular planes oriented parallel to the crystallographic axes of the crystallite. The porosity and structure of the samples were possibly determined by the structure of the initial solid solution. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Donetskiy politekhnicheskiy institut (Donetsk Polytechnic Institute)

SUBMITTED: 090ct62 DATE ACQ: 27Aug63 ENCL: 00

SUB CODE: ML NO REF SOV: 002 OTHER: 001

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

ADERIKHIN, P.G.; SANTALOV, I.A.

Intercollege conference on the scientific and practical aspects of soil erosion and its control. Pochvovedenie no.10:114 O '62. (MIRA 15:11)

(Erosion--Congresses)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

5.3610.

AUTHORS: Santalova, N. I. (Deceased), Konstantinov, P. A., Gol'dfarb, Ya. L. 80009 S/020/60/131/05/033/069 B011/B117

TITLE: Reducing Desulfurization of Some Diamines of the Thiophene Series

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1102-1105 (USSR)

TEXT: The authors wished to extend the reducing desulfurization method to the di-tertiary amines of the thiophene series. Thus, higher alkylene diamines can be obtained, which, in turn, could be utilized to synthetize the bis-ammonium salts with a potential curare-like effect. As compared to decamethonium, the halogen alkylates of the diamines IV and IVa would form a new type of such compounds. They are ramified in the center of the chain. Such ramifications exert an influence on the activity of some substances with a curare-like effect (Ref 4). The authors used 2,2-bis(2-thienyl)-butane which is easily formed from thiophene and methyl ethyl ketone as the starting material. By chloromethylation, the bis-chloro-methyl derivative (I) was obtained. This derivative was used in the "raw" state, since it decomposes to a considerable degree when subjected to vacuum distillation. When hexamethylene tetramine is reacted with I, the corresponding salt, and from this, the diamine II is obtained in the ordinary way. Hydrogenolysis with Raney nickel yielded only mixtures distillable in a too broad range. Therefore, skeleton cobalt was used by the authors, although it is

Card 1/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, O. V.

Santalova, O. V. "The functional investigations of the superficial layers of the skin by the 'pain time' method," Eksperim. i klinich. issledovaniya (Leningr. kozhno-venerol. in-t), Vol. VII, 1949, p. 168-86, - Bibliog: 13 items.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, O.N., kandidat meditsinskikh nauk.

Infiltrating papillomatous chromomycosis. Vest.ven.i derm. no.2:58 Mr-Ap '54. (MLRA 7:4)

1. Iz Leningradskogo kozhno-venerologicheskogo instituta.
(Skin--Diseases)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, O.V., kandidat meditsinskikh nauk

Data on the effect of vitamin D_2 in tuberculosis of the skin. Vest. ven. i derm. no.4:59 Jl-Ag '54. (MLRA 7:8)

1. Iz Respublikanskogo kozhno-venerologicheskogo instituta Ministerstva zdravookhraneniya RSFSR.
(CALCIFEROL) (SKIN--TUBERCULOSIS)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, O.V., starshiy nauchnyy sotrudnik (Leningrad)

Intracutaneous achrichine injections in treating lupus erythematosus. Vest.ven. i derm.no.3:50 My-Je '55.(MLRA 8:10)
(QUINACRINE) (LUPUS)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, O.V.

Problem of lupus carcinoma. Vest. derm. i ven. 34 no.7:30-32 no.7:30-32 '60. (MIRA 13:12)
(LUPUS) (SKIN--TUMORS)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, O.V., kand. med. nauk

Papulonecrotic tuberculosis of the skin; data from the Leningrad luposary. Vest. derm. i ven. no.2:27-28 '64.

(MIRA 17:11)

1. Klinicheskaya kozhnotuberkuleznaya bol'nitsa "Lyupozoriy" (glavnyy vrach M.A. Abramova), Leningrad.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, S. A.

SANTALOVA, S. A.--"Roentgenographic Investigation of the Fatigue Breakdown of Steel Previously Cold-Worked by Grinding." Leningrad State Pedagogical inst imeni A. I. Gertsen. Chair of Experimental Physics. Leningrad, 1955. (Dissertation for the Degree of Candidate of Physicomathematical Sciences).

SO: Knizhnaya Letopis' No. 27, 2 July 1955

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

X-ray Investigation of the Fatigue Process in Steel (cont.)

and below the σ_w value. In tests conducted with rest periods, the stabilization occurred sooner. In the case of polished as well as annealed S's, the stabilization of D's was observed long before the failure of the S's.

A. B.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

VASIL'YEV, Vladimir Konstantinovich; SANTALOV, Sergey Andreyevich; SKRUDYUKOV, S.A., nauchnyy red.; SHAURAK, Ye.N., red.; KONTOROVICH, A.I., tekhn.red.

[Thermal analysis of marine steam- and gas- turbine units] Teplovye raschety sudovykh parovykh i gazovykh turboagregatov. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1960. 814 p. (MIRA 14:3)

(Marine turbines)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, Z. V.

SANTALOVA, Z. V.: "Factors affecting the process of hot shaping of the surface parts of shoe uppers." Min Higher Education USSR. Moscow Technological Inst of Light Industry imeni L. M. Kaganovich. Moscow, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE).

So.: Knizhnaya letopis', No. 25, 1956

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

Santalova, Z.V.

ZYBIN, Yu.P., doktor tekhn.nauk, prof.; SANTALOVA, Z.V., kand.tekhn.nauk

Forming conditions of chrome-tanned leather surfaces. Leg.prom. 18 no.4:24-27 Ap '58. (MIRA 11:4)
(Leather work)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTALOVA, Z.V., kand. tekhn. nauk; ZYBIN, Yu. P., doktor tekhn. nauk, prof.

Effect of the system of pressing on the physicomechanical indices of chrome leather. Izv. vys. ucheb. zav.; tekh. leg. prom. no.4:51-61 '59. (MIRA 13:2)

1. Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvi.
(Leather)

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SANTALOVA, Z.V.

Method of pressure investigation in designing sensible footwear. Nauch.-issl.trudy TSNIKP no.32:79-87 '60. (MIRA 15:12)
(Shoe manufacture)

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ZASLAVSKIY, M.; AGEYEV, V., tekhnik; SANTANEYEV, V., elektromonter

Training specialists. Avt.transp. 41 no.11:52-53 N '63. (MIRA 16:12)

1. 1-y gruzovoy avtopark Leningradskogo avtomobil'nogo upravleniya (for Santaneyev).

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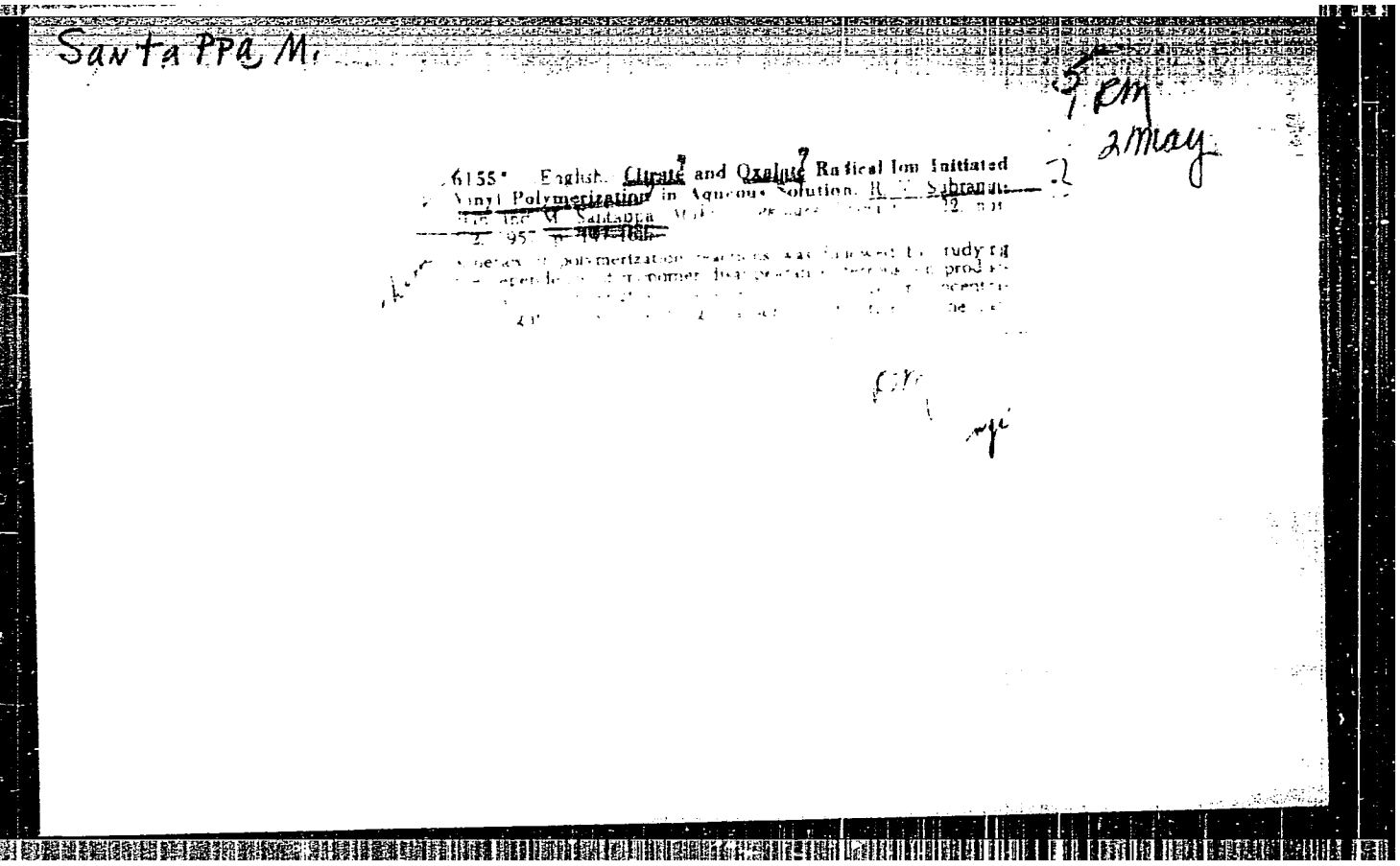

Santa Ppa, Ma

3 PM
2 May

6155* English. Citrate and Oxalate Radical Ion Initiated Vinyl Polymerization in Aqueous Solution. R. Subramanian, Santa Barbara, Calif.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

LENK, R.; SANTAR, I.

Angular dependence of spin densities on protons of CH_2 group. Chekhosl fiz zhurnal 14 no. 6:469-473 '64.

1. Institute of Nuclear Research, Czechoslovak Academy of Sciences, Rez.

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SANTATUR, M.A.

Surgical treatment of gastric cancer in a district hospital. Vop. klin. pat. no.2:61-68 '61 (MIRA 16:12)

1. Iz khirurgicheskogo otdeleniya (zav. - Ye.I.Rukhlis) Kraskovskoy bol'nitsy (glavnyy vrach - A.I.Chebotareva) Moskovskoy oblasti.

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M.

RUMANIA/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44043

Author : Puia, I., Barbat, I., Santau, Otilia

Inst : -

Title : A Study of Frost Resistance in Winter Barley.

Orig Pub : Probl agric, 1957, 9, No 8, 26-36.

Abstract : Data grom 1955-1957 on the studies of frost resistance in the winter barley varieties Chenad 386, Populazia Cibiu, Kluzh 123 and control Chenad 117. Low temperature produces accumulation of protective substances in the cell sap. It also increases water permeability of the protoplasm and the degree of hydrophilic quality in colloids. The processes of hardening (against frost) in winter barley and winter wheat are similar but barley does not attain the degree of frost resistance in wheat. -- A.F. Khlystova.

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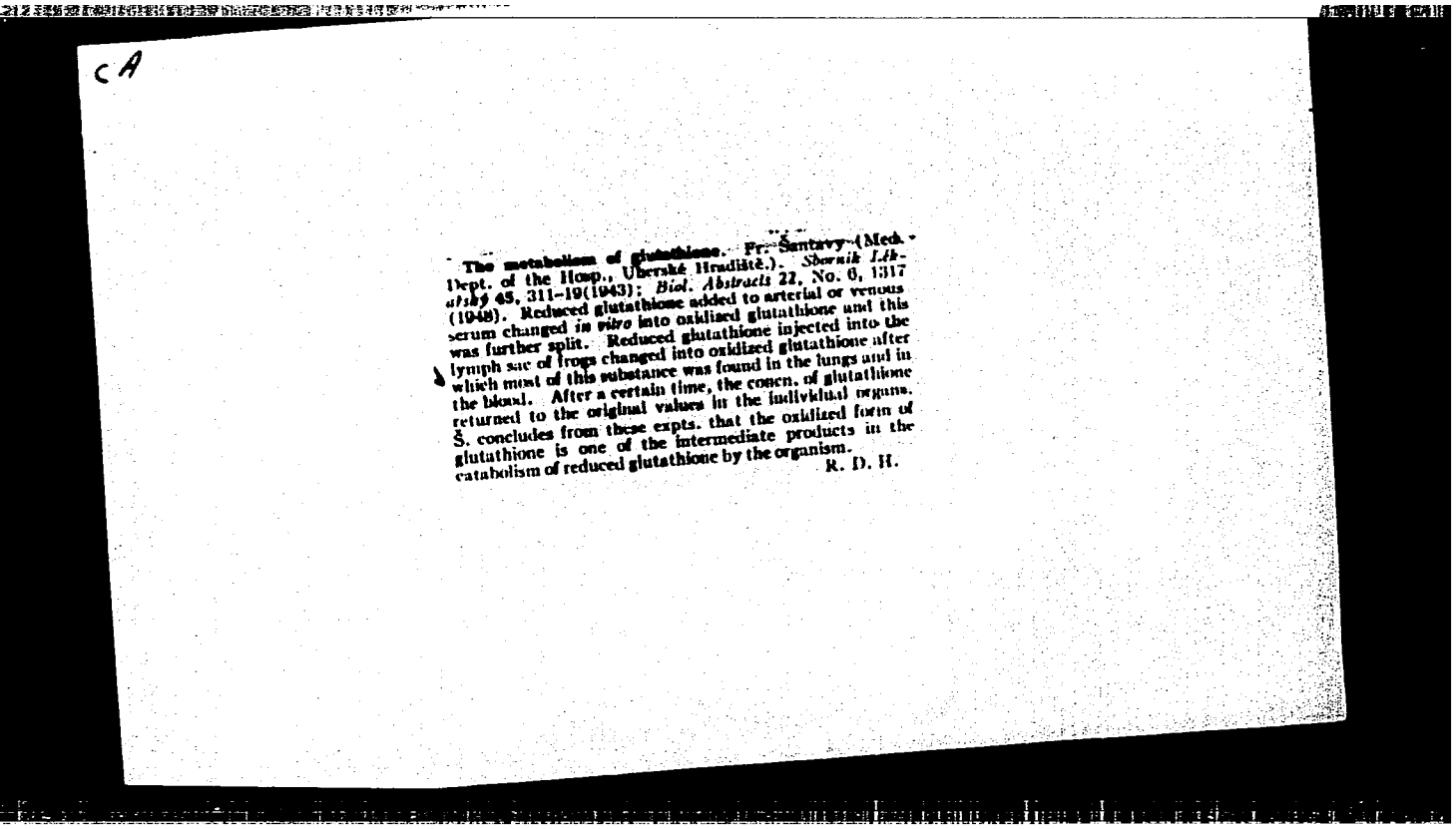

CA

The metabolism of glutathione. Fr. Šantavý (Med. Dept. of the Hosp., Uherské Hradiště.). *Sborník Lékařský* **45**, 311–19(1943); *Biol. Abstracts* **22**, No. 6, 1317 (1948). Reduced glutathione added to arterial or venous serum changed *in vitro* into oxidized glutathione and this was further split. Reduced glutathione injected into the lymph sac of frogs changed into oxidized glutathione after which most of this substance was found in the lungs and in the blood. After a certain time, the concn. of glutathione returned to the original values in the individual organs. Š. concludes from these expts. that the oxidized form of glutathione is one of the intermediate products in the catabolism of reduced glutathione by the organism.

R. D. H.

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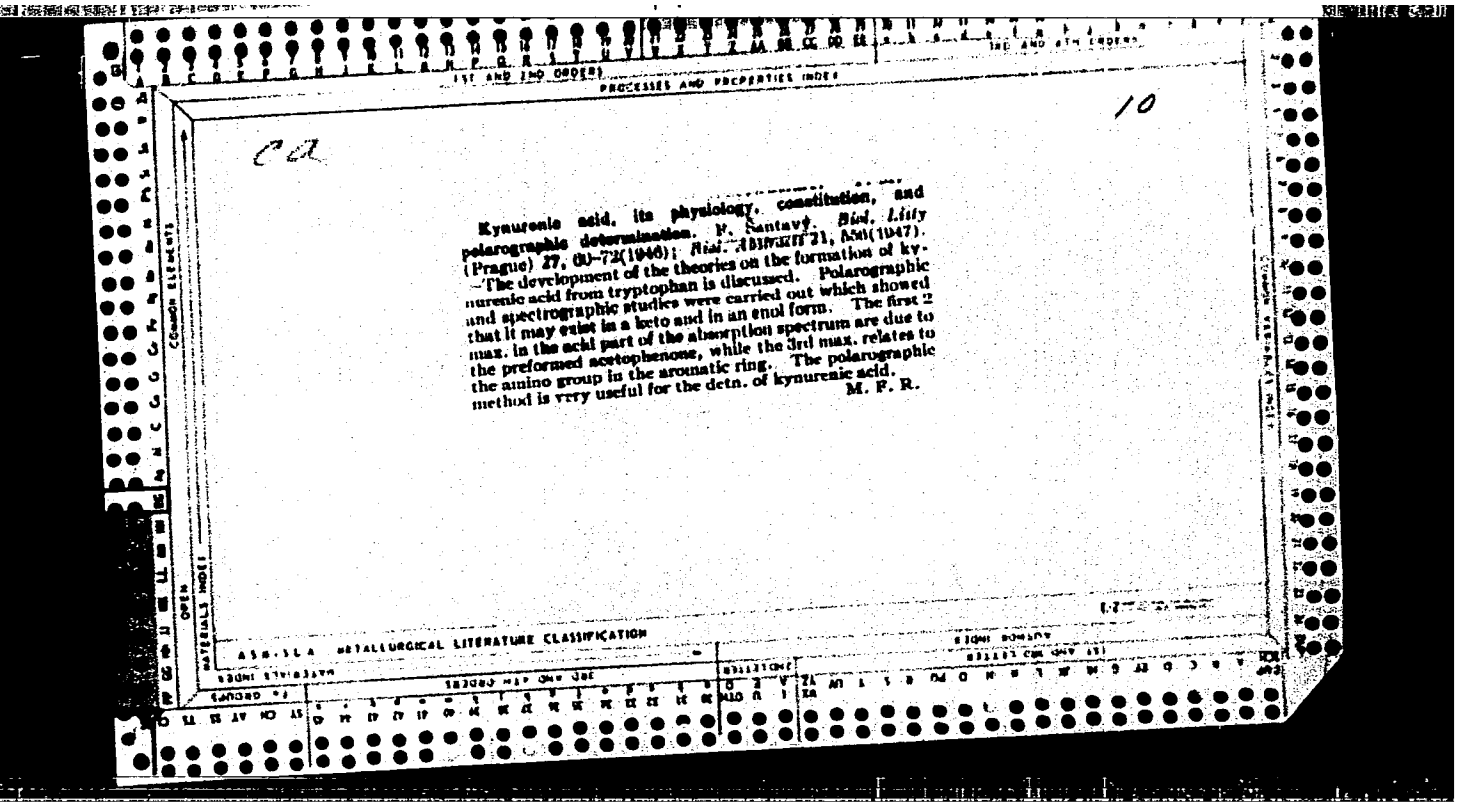

Kynurenic acid, its physiology, constitution, and polarographic determination. F. Santavý. *Biol. Listy* (Prague) 27, 69–72(1946); *Chem. Abstr.* 41, 4501(1947). The development of the theories on the formation of kynurenic acid from tryptophan is discussed. Polarographic and spectrographic studies were carried out which showed that it may exist in a keto and in an enol form. The first 2 max. in the acid part of the absorption spectrum are due to the preformed acetophenone, while the 3rd max. relates to the amino group in the aromatic ring. The polarographic method is very useful for the detn. of kynurenic acid.
M. F. R.

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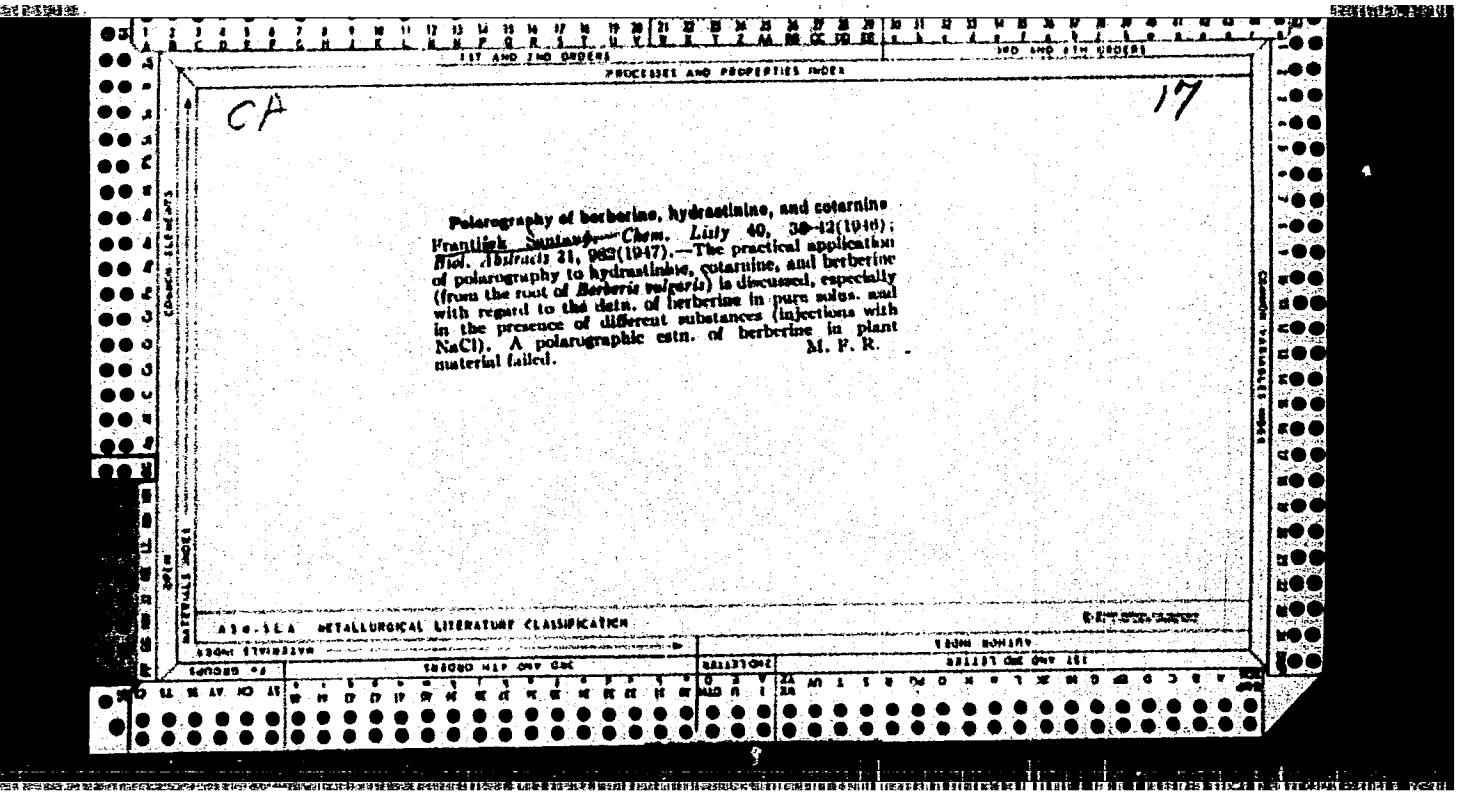

CA

17

Polarography of berberine, hydrastinine, and cotarnine. Frantiŝek Santavý.—*Chem. Listy* 40, 38–42(1946); *Biol. Abstracts* 21, 982(1947).—The practical application of polarography to hydrastinine, cotarnine, and berberine (from the root of *Berberis vulgaris*) is discussed, especially with regard to the detn. of berberine in pure solns. and in the presence of different substances (injections with NaCl). A polarographic estn. of berberine in plant material failed. M. F. R.

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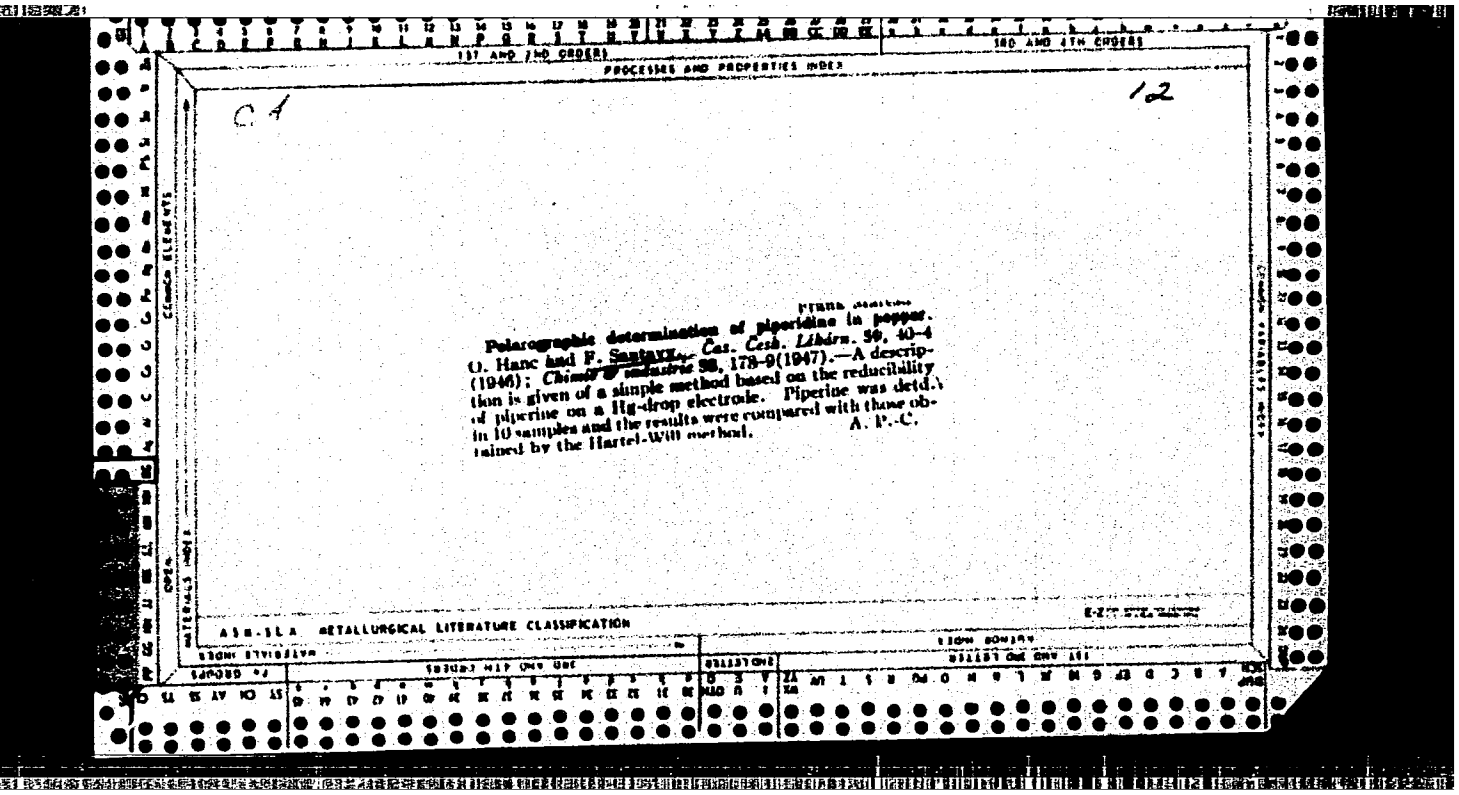

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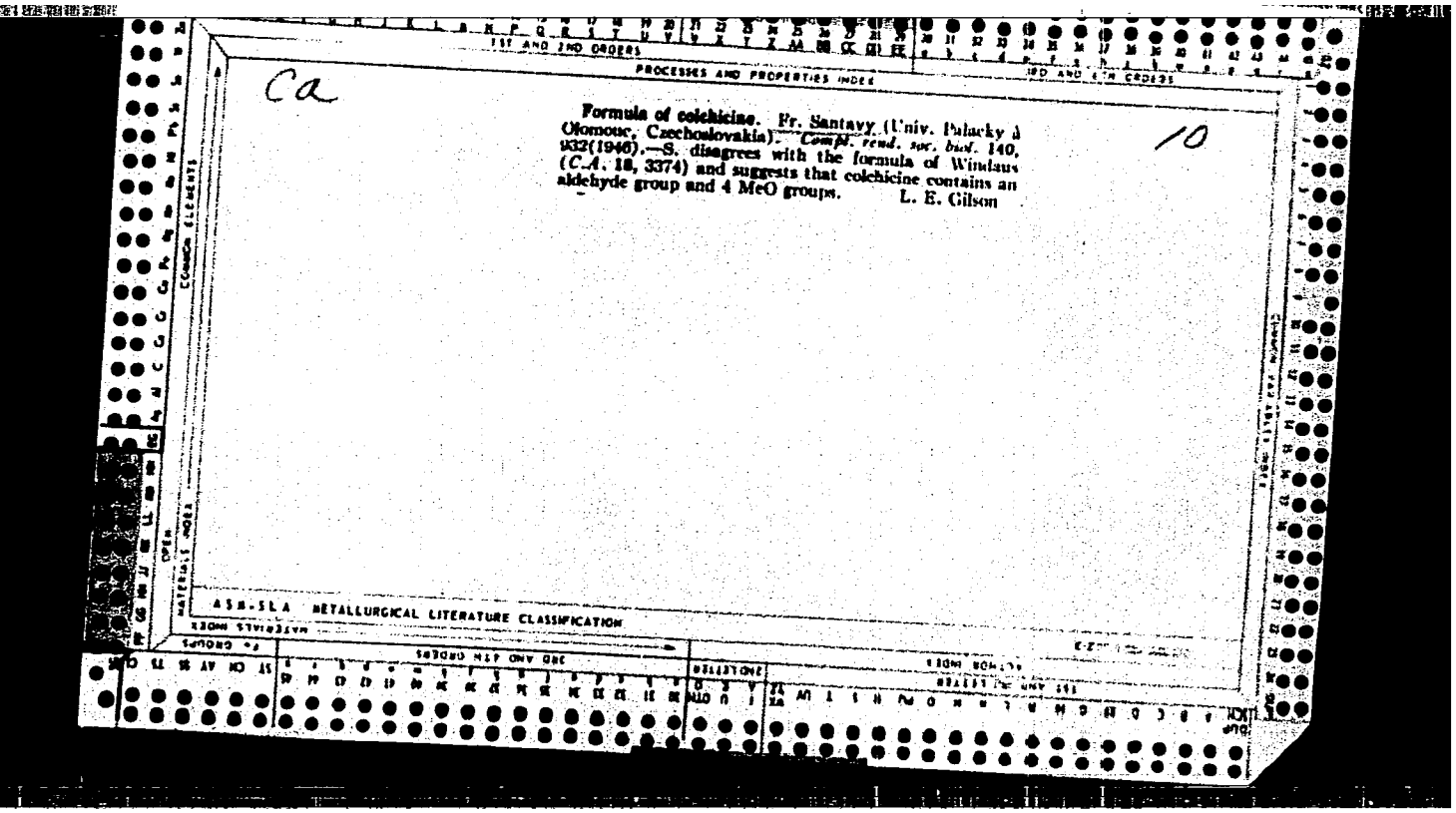

Ca

10

Formula of colchicine. Fr. Santavy (Univ. Palacky a Olomouc, Czechoslovakia). *Compt. rend. soc. biol.* 140, 1332(1946).—S. disagrees with the formula of Windaus (*C.A.* 18, 3374) and suggests that colchicine contains an aldehyde group and 4 MeO groups. L. E. Gilson

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

Santavy Fr. Biologickeho ustavu lekarske fakulty Palackeho university v Olomouci. Uloha glutathionu pri svalove praci The part played by glutathione in muscular exercise Lekarske Listy 1947, 2/11 (259-263) Graphs 5

The amound of reduced glutathione (GSH) was determined in skeletal muscles, heart, and blood. An increase was found in skeletal muscles after training. Muscular exercise caused first a rise of the level of GSH in the venous blood, and then a decrease. In untrained men there was an instantaneous drop of GSH, in the half-trained the initial increase of GSH was followed by a decrease, and in the well-trained the changes were only small. In odgs' hearts most of glutanthione, reduced as well as oxidized, was found in the left ventricle. In guinea-pigs kept under reduced atmospheric pressure corresponding to 6500 m of altitude there was a drop of GSH in skeletal muscles, blood cells, heart and spleen in six hours, while in six and fourteen days there were normal levels of GSH in skeletal muscles and blood cells but increased levels in heart and liver. Ascorbic acid given to guinea-pigs caused an immediate increase of GSH in liver, heart, skeletal muscle and lungs. The increase was greatest in the liver. Glutathione may play an important part in the activity of muscles. In all the experiments only changes of reduced glutathione were observed, never of the oxidized form. Karasek-Prague

So: Physiology, Biochemistry and Pharmacology, Section II, Vol. I, #1-6

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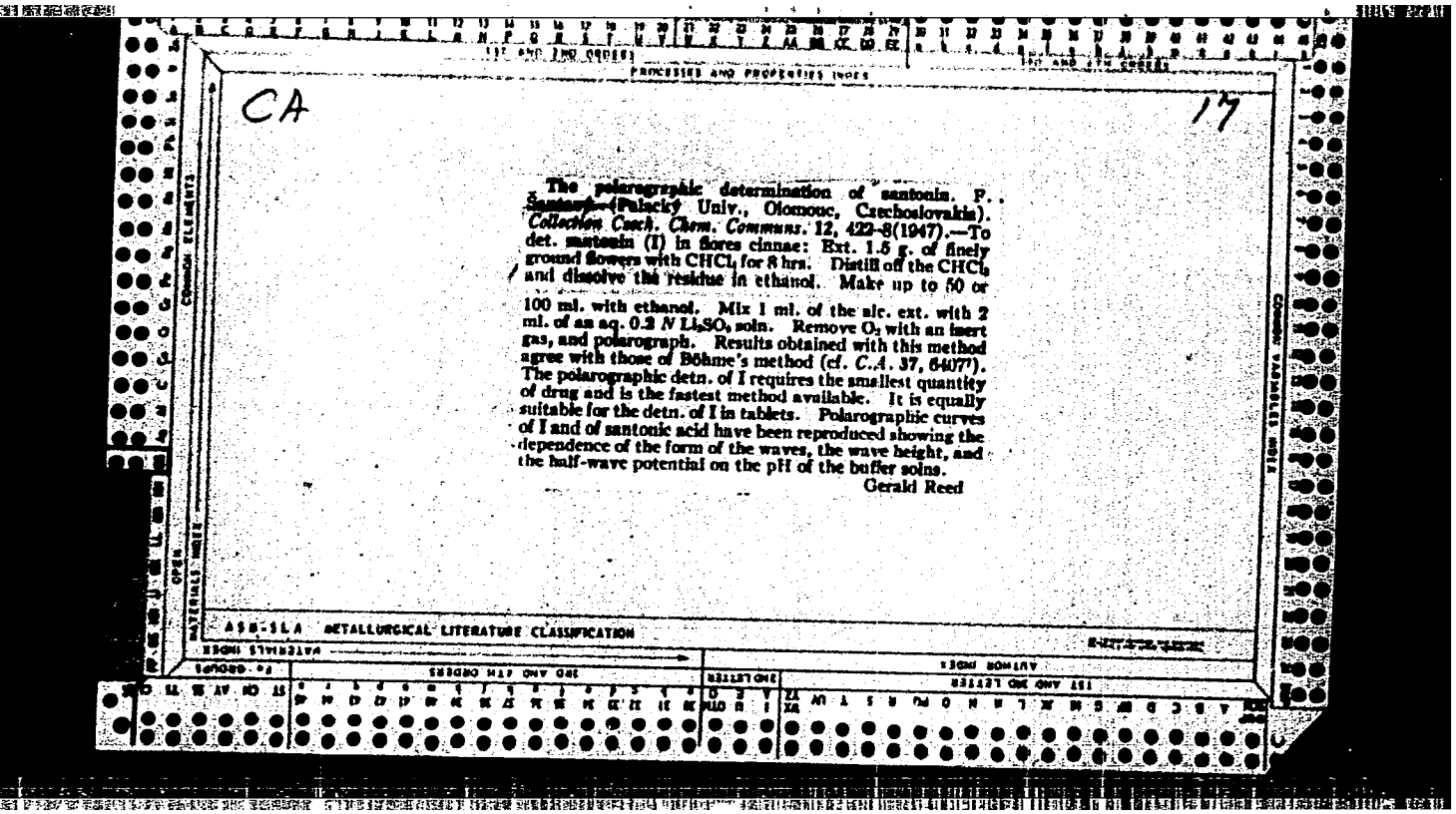

CA 17

The polarographic determination of santonin. F. Santavý (Palacký Univ., Olomouc, Czechoslovakia). *Collection Czech. Chem. Communs.* 12, 422-8(1947).—To det. santonin (I) in flores cinnae: Ext. 1.5 g. of finely ground flowers with $CHCl_3$ for 8 hrs. Distill off the $CHCl_3$ and dissolve the residue in ethanol. Make up to 50 or 100 ml. with ethanol. Mix 1 ml. of the alc. ext. with 2 ml. of an aq. 0.2 *N* Li_2SO_4 soln. Remove O_2 with an inert gas, and polarograph. Results obtained with this method agree with those of Böhme's method (cf. *C.A.* 37, 6407⁷). The polarographic detn. of I requires the smallest quantity of drug and is the fastest method available. It is equally suitable for the detn. of I in tablets. Polarographic curves of I and of santonic acid have been reproduced showing the dependence of the form of the waves, the wave height, and the half-wave potential on the pH of the buffer solns.

Gerald Reed

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ŠANTAVÝ FR. Z Biologického Ústavu, Lékařské Fakulty, Palackého University v. [illegible] a z Farmaceutického Ústavu, University v Basileji. Přípava nové kyseliny z kochicinu Preparation of colchicinic acid from colchicine Sborník Lékařský 1947, 50/1 (24-30)

Account of the preparation of a new colchicinic acid by heating colchicine (0.1 Gm) with methanol (2 ml) and sodium methoxide (7 ml) for 30 minutes to boiling point using a reflux condenser. The yield of the acid (m.p. 262-266) was 50-60 per cent. Its methylester (m.p. 262) was also prepared. The constitution of this new acid cannot be explained from the constitution formula for colchicine of Windaus, but it agrees with the conceptions of Dewar and of Šantavý.

Ulehla - Brno

SO: Physiology, Biochemistry & Pharmacology 2.1 Jan.-June 1949

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C A

II D

Isolation of new substances from meadow saffron. P. Šantavý. *Chem. Listy* 42, 177-80(1948).—Various parts of meadow saffron (seeds, capsules, flowers, bulbs) were dried, fats removed by petroleum ether extn., and the residue extd. with alc. The residue after evapn. of alc. was extd. with Et_2O and $CHCl_3$ and chromatographed. The fractions were examd. polarographically. Several new reducible compds. were found. Exptl. details and chromatograms are given. M. Hudlický

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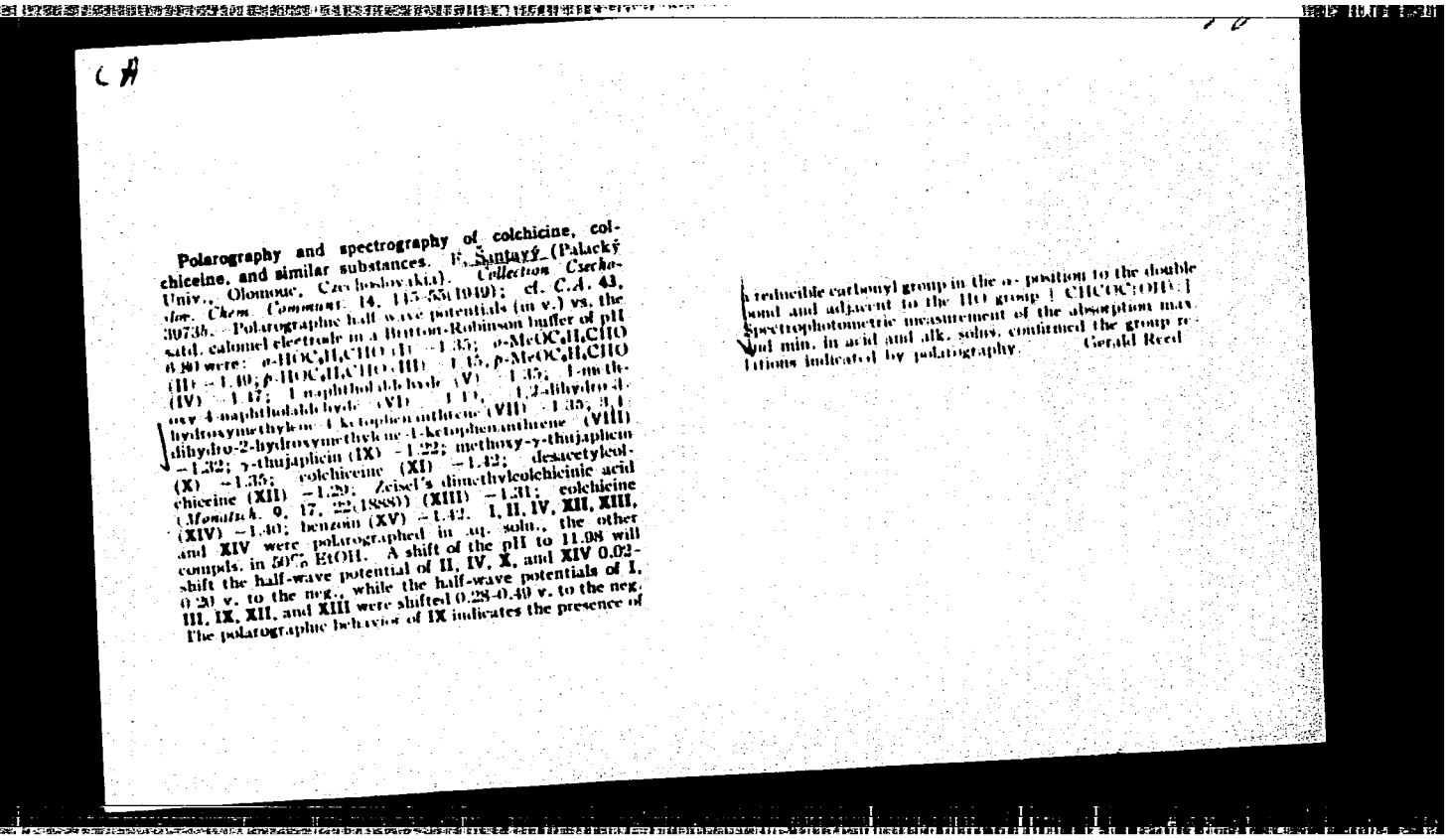

Polarography and spectrography of colchicine, colchiceine, and similar substances. F. Šantavý (Palacký Univ., Olomouc, Czechoslovakia). *Collection Czechoslov. Chem. Communs.* 14, 115-53(1949); cf. *C.A.* 43, 3073h. Polarographic half wave potentials (in v.) vs. the satd. calomel electrode in a Britton-Robinson buffer of pH 6.90 were: *o*-HOC$_6$H$_4$CHO (I) −1.35; *o*-MeOC$_6$H$_4$CHO (II) −1.40; *p*-HOC$_6$H$_4$CHO (III) −1.15; *p*-MeOC$_6$H$_4$CHO (IV) −1.47; 1-naphthaldehyde (V) −1.15; 1-methoxy-4-naphthaldehyde (VI) −1.11; 1,2-dihydro-4-hydroxymethylene-1-ketophenanthrene (VII) −1.35; 3,4-dihydro-2-hydroxymethylene-1-ketophenanthrene (VIII) −1.32; γ-thujaplicin (IX) −1.22; methoxy-γ-thujaplicin (X) −1.35; colchiceine (XI) −1.42; desacetylcolchiceine (XII) −1.29; Zeisel's dimethylcolchicinic acid (*Monatsh.* 9, 17, 22(1888)) (XIII) −1.31; colchicine (XIV) −1.40; benzoin (XV) −1.42. I, II, IV, XII, XIII, and XIV were polarographed in aq. soln., the other compds. in 50% EtOH. A shift of the pH to 11.98 will shift the half-wave potential of II, IV, X, and XIV 0.02-0.20 v. to the neg., while the half-wave potentials of I, III, IX, XII, and XIII were shifted 0.28-0.40 v. to the neg. The polarographic behavior of IX indicates the presence of a reducible carbonyl group in the α-position to the double bond and adjacent to the HO group. CHCl$_2$CO$_2$H, spectrophotometric measurement of the absorption max. and min. in acid and alk. solns. confirmed the group reductions indicated by polarography. Gerald Reed

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C-3 Physiology, Biochemistry etc.
(Pharmacological Rev.)

1945. Polarography of berberine, hydrastinine, and ostruthin. E. Šantavý (Coll. Trav. chim. Tchécosl., 1940, 12, 377—387).—The polarographic determination of these three drugs in pharmaceutical preps. is attempted. Good results are obtained for total hydrastinine + ostruthin, but determination of the individual alkaloids is only approximate. Berberine can be determined only in absence of interfering substances. C. R. SEABLE.

C.A. 42, 7487 b.

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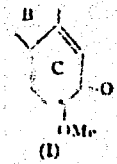
Effect of hydrogen peroxide in alkaline medium on colchicine. J. Čech and F. Santavý (Palacky Univ., Olomouc). *Collection Czechoslov. Chem. Communs.* 14, 532–9(1949)(in English).—By the action of H_2O_2 in alk. soln. on *colchicine* (I) were obtained *N-acetylcolchinol* (II) and an amorphous product. From the reaction mixt. obtained on methylation with Me_2SO_4 or CH_2N_2 was isolated *N-acetylcolchinol Me ether* (III). On the basis of this data, the C-ring of Dewar's formula for I (*Nature* 155, 479(1945)) should have the substituents located as shown in formula I. I (1 g.), m. 140–6°, in an equiv. amt. of 0.1 *N* NaOH and of 30% H_2O_2 was held at 60° for 6 hrs., the mixt. cooled (crystals, m. 140–8°,



(I)

may be filtered off at this point), acidified to litmus with 15% HCl, extd. with $CHCl_3$, the $CHCl_3$ evapd., and the residue (IV) crystd. from MeOH-H_2O. Chromatography of IV on alkali-free Al_2O_3, with $CHCl_3$-EtOH (92:8) as solvent, gave II, m. 213–15°, $[\alpha]_D^{19}$ −51.6 ± 2°, which gave no color with $FeCl_3$ and did not reduce polarographically. II (50 mg.) in 10 ml. MeOH treated with ethereal CH_2N_2 for 0.5 hr. gave a product, m. 201–3° (sublimation) (from EtOAc-Et_2O), identical with an authentic sample of III. Crude IV (2 g.) was shaken 4 hrs. in 100 ml. 10% NaOH and 10 ml. Me_2SO_4 and extd. with $CHCl_3$; evapn. of the $CHCl_3$ gave III, m. 204–6° (from aq. MeOH). III was also obtained by methylation of IV with CH_2N_2 and chromatography (on Al_2O_3) of the product; the other reaction products were amorphous and not identified.

R. U. Elam

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C A

16

Polarography of alcoholic fermentation. F. Šantavý (Univ. Palacky, Olomouc, Czech.). *Bull. sc. chim. biol.* 31, 1211–19(1949).—By the polarographic technique described, glyceraldehyde, methylglyoxal, and AcH can be detected in a neutral or alk. soln., and pyruvic acid can readily be detected in a fermentation mixt. whether acid, neutral, or alk. 22 references. L. E. Gilson

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11

Polarography of opium, narceine, and meconic acid. J. Hobza and F. Šantavý (Palacc Univ., Olomouc, Czech.). *Časopis Českého Lékárnictva* 62, 86-9(1949).--Polarographic studies were made to det. which alkaloids of opium are reducible at the dropping-Hg electrode. Narceine and meconic acid gave well developed waves which indicated reduction. In this way meconic acid was observed in opium and tincture of opium in the concns. of 3.2 and 4.8%. Cryptopine was not studied and papaverine gave neg. results. -nes L. Jezl

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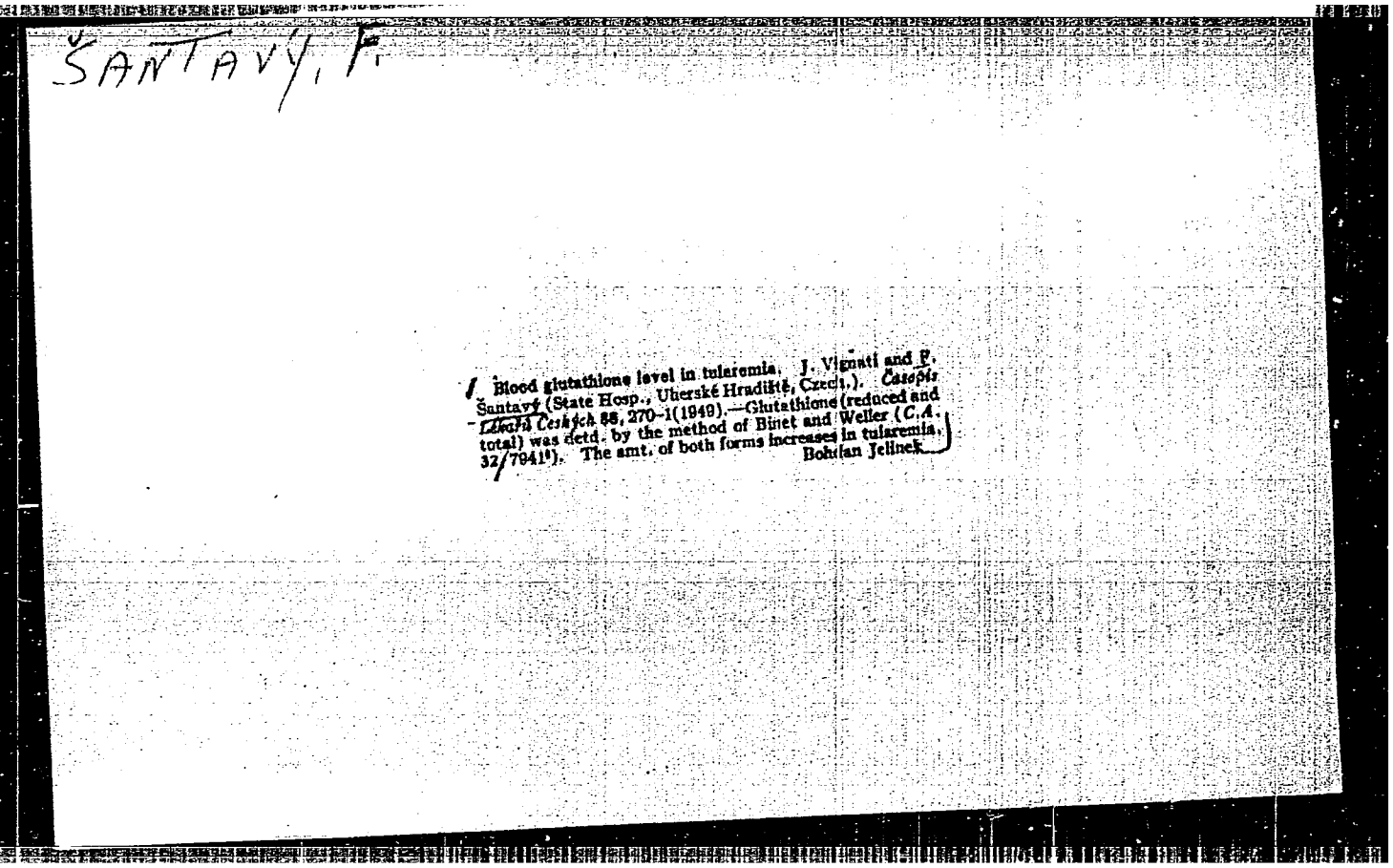

ŠANTAVÝ, F.

Blood glutathione level in tularemia. J. Vignati and F. Šantavý (State Hosp., Uherské Hradiště, Czech.). *Časopis Lékařů Českých* 88, 270–1(1949).—Glutathione (reduced and total) was detd. by the method of Binet and Weller (*C.A.* 32/7941[9]). The amt. of both forms increases in tularemia. Bohdan Jelinek

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4

Polarographic behavior of reductic acid. F. Santavý and B. Bitter (Palacký Univ., Olomouc). *Collection Czechoslov. Chem. Communs.* 15, 112-16(1950)(in English). —Polarographic measurements of ascorbic acid (I) in Britton-Robinson universal buffer were identical with those of Vavřín (*C.A.* 44, 1782*d*). Measurements of reductic acid (2,3-dihydroxy-2-cyclopenten-1-one) (II) in the same buffers and 0.2 *N* Li salts showed that $E_{1/2}$ (oxidation) for II is about 32 mv. more pos. than for I. II is not reducible.

K. G. Stone

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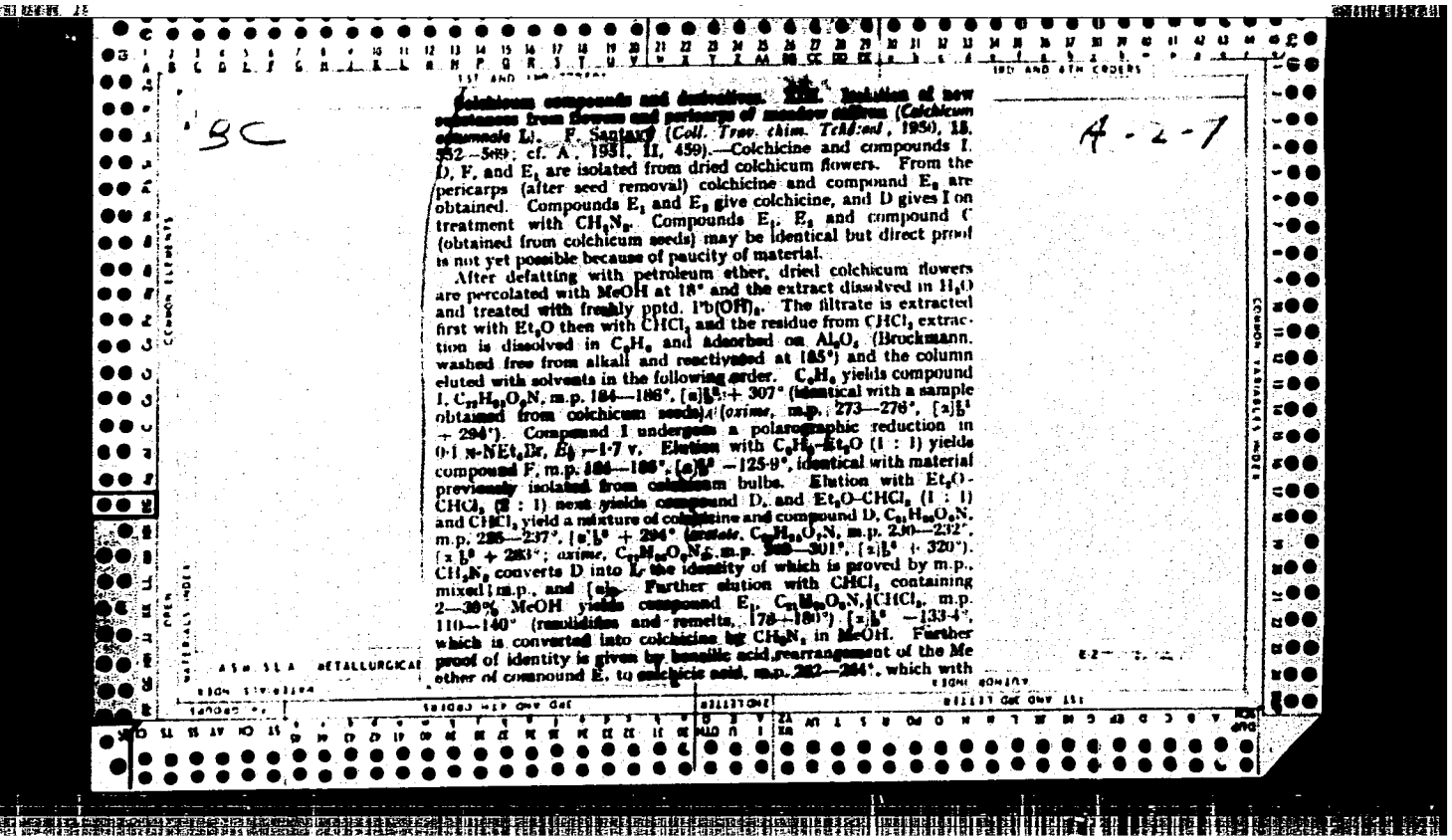

Colchicum compounds and derivatives. XIII. Isolation of new substances from flowers and pericarps of meadow saffron (*Colchicum autumnale* L.). F. Santavý. (*Coll. Trav. chim. Tchécosl.*, 1950), 15, 552–569; cf. A., 1951, II, 459).—Colchicine and compounds I, D, F, and E_1 are isolated from dried colchicum flowers. From the pericarps (after seed removal) colchicine and compound E_2 are obtained. Compounds E_1 and E_2 give colchicine, and D gives I on treatment with CH_2N_2. Compounds E_1, E_2 and compound C (obtained from colchicum seeds) may be identical but direct proof is not yet possible because of paucity of material.

After defatting with petroleum ether, dried colchicum flowers are percolated with MeOH at 18° and the extract dissolved in H_2O and treated with freshly pptd. $Pb(OH)_2$. The filtrate is extracted first with Et_2O then with $CHCl_3$ and the residue from $CHCl_3$ extraction is dissolved in C_6H_6 and adsorbed on Al_2O_3 (Brockmann, washed free from alkali and reactivated at 185°) and the column eluted with solvents in the following order. C_6H_6 yields compound I, $C_{22}H_{25}O_6N$, m.p. 184—186°, $[\alpha]_D^{18}$ + 307° (identical with a sample obtained from colchicum seeds); *oxime*, m.p. 273—276°, $[\alpha]_D^{18}$ + 294°). Compound I undergoes a polarographic reduction in 0·1 N-NEt_4Br, $E_{\frac{1}{2}}$ −1·7 v. Elution with C_6H_6–Et_2O (1 : 1) yields compound F, m.p. 184—186°, $[\alpha]_D^{18}$ −125·9°, identical with material previously isolated from colchicum bulbs. Elution with Et_2O–$CHCl_3$ (2 : 1) next yields compound D, and Et_2O–$CHCl_3$ (1 : 1) and $CHCl_3$ yield a mixture of colchicine and compound D, $C_{21}H_{23}O_6N$, m.p. 285—287°, $[\alpha]_D^{18}$ + 294° (*acetate*, $C_{23}H_{25}O_7N$, m.p. 230—232°, $[\alpha]_D^{18}$ + 283°; *oxime*, $C_{21}H_{24}O_6N_2$, m.p. 300—301°, $[\alpha]_D^{18}$ + 320°). CH_2N_2 converts D into I, the identity of which is proved by m.p., mixed m.p., and $[\alpha]_D$. Further elution with $CHCl_3$ containing 2—30% MeOH yields compound E_1, $C_{21}H_{23}O_6N$,$\frac{1}{2}CHCl_3$, m.p. 110—140° (resolidifies and remelts, 178—181°) $[\alpha]_D^{18}$ −133·4°, which is converted into colchicine by CH_2N_2 in MeOH. Further proof of identity is given by benzilic acid rearrangement of the Me ether of compound E_1 to colchicic acid, m.p. 282—284°, which with

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CH_2N_2 yields the Me ester, m.p. 262—263°. Attempts to obtain the Et ether of substance E_1 by $CHMeN_2$ give no cryst. product, but the residue with NaOMe–MeOH at the b.p. yields a rearranged *acid*, $C_{22}H_{31}O_4N$, m.p. 264—266° (sublimes, 235°), $[\alpha]_D^{20}$ −168°, giving with CH_2N_2 the *Me* ester, $C_{23}H_{33}O_4N$, m.p. 239—241°, $[\alpha]_D^{20}$ −172°. Substance E_1 yields an *acetate*, $C_{23}H_{33}O_5N$, m.p. 192—194°, $[\alpha]_D^{20}$ −125·4°, which on rearrangement in NaOMe–MeOH loses Ac giving an *acid*, $C_{21}H_{31}O_4N$, m.p. 270—275° (*acetate*, $C_{23}H_{33}O_5N$, m.p. 314—317°, $[\alpha]_D^{20}$ −144·7°; *acetate Me* ester, $C_{24}H_{35}O_5N$, m.p. 280—283°, $[\alpha]_D^{20}$ −152·7°), which is also obtained (m.p. 280—283°) from compound E_1 directly by the same rearrangement. Both specimens of the acid with CH_2N_2 yield the Me ester of colchicic acid. Hydrolysis of compound E_1 with 1% aq. HCl (steam-bath, 0·6 hr.) yields a *compound*, $C_{20}H_{31}O_4N$, m.p. 257—260°. The MeOH extract of dried colchicum pericarps (separated from seed) is dissolved in H_2O and extracted with Et_2O then with $CHCl_3$. The $CHCl_3$ extract is adsorbed from light petroleum on Al_2O_3. C_6H_6 and C_6H_6–Et_2O give no eluate, but $CHCl_3$ yields colchicine, m.p. 155—157°, $[\alpha]_D^{17}$ −120°, and then $CHCl_3$–MeOH (96 : 4—84 : 16) yields compound E_2, $C_{21}H_{29}O_6N$, m.p. 110—150° (resolidifies, m.p. 176—182°) $[\alpha]_D^{17}$ −109·6°. Compound E_2 in MeOH with CH_2N_2 at 20° yields material from which, after chromatographic purification, colchicine is obtained.

I. G. M. Campbell.

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SANTAVY, F.

1204. POLAROGRAPHY OF HEART POISONS WITH LACTONE RINGS. F. Santavy, O. Vapka, and J. Malinsky (Coll. Trav. chim. Tchecosl., 1950, 15, 963-964). - Heart glycosides of poisons with a doubly unsaturated 6-membered lactone ring are polarographically reducible at a more positive half-wave reduction potential (-1.82v.) than glycosides with an unsaturated 5-membered lactone ring (-2.3v.) which provides means for their differentiation. Heart poisons with a 6- membered lactone rong give well-developed and reproducible waves in a solution containing Li salts. Heart glycosides with a 5-membered lactone ring can be polarographically reduced in a medium of quaternary bases. The possibility of polarographic determination of heart poisons in the raw material is demonstrated. H. Wren.

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Pore formation and its effect on the rate of evaporation of the volatile component from a solid alloy. F. A. Santalov. *Zhur. Tekh. Fiz.* 20, 564–70(1950).—The total pore vol. was detd. from the d. and vol. contraction after evapn. of the volatile component in Ag-Cd, Ag-Zn, and Cu-Zn alloys, with varying contents of Cd or Zn. The alloys were heated under 0.1 mm. Hg to progressively increasing temps.; thus, Ag-Cd with Cd 11.47–43.80%, 0.5 hr. at 600, 0.33 hr. at 650, 0.66 hr. at 700, 1 hr. at 750, 3 hrs. at 800, and finally 2 hrs. at 825°. Under these conditions with an initial Cd content of 11.47, 22.77, 38.84, and 43.80%, the final vol. contraction was 7.33, 12.28, 25.29, and 32.07%, the pore vol. 3.38, 12.94, 25.30, and 27.00%, resp. Analogous data are given for Ag-Zn alloys with Zn 9.28–28.66% (heated 0.5 hr. at 720°, then isothermally at 750°), and Cu-Zn with 9.88–35.50% Zn (heated to 800°, then 4 hrs. at 850°, and 4 hrs. at 900°). The initial rate of loss of Zn from the latter alloys is the greater the higher the initial Zn content; as evapn. progresses, the rate decreases. Complete evapn. of the Cd or Zn is attained in proportion to the initial amt. in the alloy. The final porosity increases with the initial content of the volatile component, and, at equal contents, with the initial thickness of the sample. The total surface area of the pores can attain very high proportions. Thus, for a 10 × 10 × 0.5 mm. brass plate, with a total pore vol. of 10%, the pore vol. is 0.005 cc., and the total inner surface area of the pores can be estd. to at least 40 sq. cm. Evidently, the porosity produced by the evapn. plays a detg. role in that process.

N. Thon

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Substances related to colchicine. XX. The antimitotic action and toxicity of substances from Colchicum autumnale. F. Santavý, B. Lang, and J. Malinský (Univ. Palacký a Ostrovac, Prague-Bulovka.). *Arch. intern. pharmacodynamie* 84, 257–68(1950).—Substances isolated from parts of the plant of *Colchicum autumnale* by S. (*C.A.* 44, 9518*i*) were studied. The ability to inhibit mitosis and the toxicity to rats decreased in order, substance B, colchicines G, C, F, E, and D and I. Death was caused by violent hemorrhagic diarrhea. M. L. C. Bertheim

SANTAVÝ, F. Czech CA: 47:11037

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113

Polarography in biochemistry, pharmacy, and medicine.
F. Santavý (Palacký Univ., Olomouc, Czechoslovakia).
Pharmazie 6, 505–12(1951).—A review with 161 references.
Edward H. Sheers

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CA

17

Substances of Colchicum autumnale and their derivatives. XXI. Isolation of substances from the corms. F. Santavý, M. Cernoch, J. Malinsky, B. Lang, and A. Zajíčková (Univ. Palacky, Olomouc, Czech.). *Ann. pharm. franç.* 9, 50–9(1951); *cf. C.A.* 45, 4343a, 4888a.—The previous publications are reviewed. Corms of *Colchicum arenarium* were cut, dried at 40 to 50°, ground, and extd. with MeOH. The residue of evapn. *in vacuo* was dissolved in H_2O and extd. with Et_2O followed by $CHCl_3$. The washed Et_2O fraction was fractionated by chromatography on Al_2O_3 from C_6H_6-petr. ether, and eluted with the same solvent, C_6H_6, Et_2O, $CHCl_3$ and $CHCl_3$-MeOH. The Et_2O eluate gave a cryst. substance m. 134–6°, of $[\alpha]_D^{19}$ −36.32° ± 2° (0.111 g. in 10 cc. $CHCl_3$), giving the Liebermann-Burchard reaction. The $CHCl_3$ ext. gives by chromatographic method (1) an eluate with Et_2O-$CHCl_3$, m. 187–9° (Substance G) $[\alpha]_D^{19}$ −147.1 ± 4° (*c* 0.517 in $CHCl_3$), obtained also from *C. autumnale*; (2) an eluate with $CHCl_3$ of colchicine, m. 155–7°, $[\alpha]_D^{19}$ −128.5 ± 2° (*c* 0.772 in $CHCl_3$). The aq. soln. contained sucrose. Similar results were obtained with other species of *Colchicum*. The bulbs of *Hemerocallis fulva* did not give analogous substances. A. E. Meyer

1951

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SANTAVY, F.; CERNOCH, M.; MALINSKY, J.; LANG, B.; ZAJICKOVA, A.

Isolation of substances from bulbs of various species of the genus Colchicum. Biol.listy 31 Suppl:75-84 2 Jan 1951. (CLML 20:9)

1. Of the Institute of Biology of the Medical Faculty of Palacky University, Olomouc.

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SANTAVY, F.

Substances from meadow saffron. XXII. Photochemical products of colchicine and derivatives. [illegible]
(Palacký Univ., Olomouc, Czechoslovakia); *Collection Czech. Chem. Communs* 16, 665-75(1951)(in German); *Biol. Listy* 31, 246-56(1951)(in Czech). cf. *C.A.* 46, 126d; 45, 7750h.—Irradiation of colchiceine, of *N*-acetylcolchinol Me ether, and of colchicinic acid with sunlight 5 years gave unchanged materials, together with small quantities of brown amorphous products. Colchicine also gave lumicolchicine I (I), $C_{21}H_{23}O_6$ (4 Me and a keto group), m. 184–8°, $[\alpha]^{18}_D$ 305° (*c* 0.783, $CHCl_3$) (from AcOEt-Et_2O) [oxime, m. 274–6° (from MeOH-Et_2O)], (cf. *C.A.* 46, 126d). Intensive ultraviolet irradiation of 1 g. colchicine 20 hrs. in aq. soln., extn. with $CHCl_3$, and chromatography on Al_2O_3, gave 0.61 g. starting material, 0.20 g. I, 0.01 g. lumicolchicine II, $C_{21}H_{23}O_6N$ (4 Me and a keto group), m. 276–8°, $[\alpha]^{18}_D$ −440° (*c* 0.820, $CHCl_3$) (from AcOEt-Et_2O) [oxime, m. 309–11° (from MeOH-Et_2O)], identical with compd. J. (*C.A.* 46, 9264c), and 0.13 g. amorphous material. Similar treatment of 5 g. compd. E_1 (*C.A.* 46, 12kl) yielded 0.15 g. of a substance, m. 235–7° (oxime, m. 299–301°), identical with compd. D (*C.A.* 46, 126d), and 0.004 g. of a substance m. 181–3°, different from I. I is identical with the "unstable" β-lumicolchicine of Grewe and W. Wulf (*C.A.* 46, 3544d); lumicolchicine II with γ-lumicolchicine. I. D. Spenser

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Polarography of alkaloids. XV. Polarography of erythrophleine. M. Tuláš and K. Šantavý (Palacký Univ., Olomouc, Czech.). *Chem. Listy* 45, 437-8(1951); cf. *C.A.* 45, 6234d.—Erythrophleine and erythrophleinic acid were reduced polarographically in Li salt solns. and in acidic Britton-Robinson Buffers (*C.A.* 25, 2903). Supposedly the conjugated double bond undergoes reduction.
M. Hudlický

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Pharmaceutical Perfumery 17

Polarography of alkaloids. XV. Polarography of morphine and some of its derivatives. František Šantavý and Miroslav Černoch (Palacký Univ., Olomouc, Czech.). *Chem. Listy* 46, 81–5(1951); cf. *C.A.* 46, 4172b.—Bainone, metathebainone, hydroxythebainone, codeinone, pseudocodeinone, and hydroxycodeinone form polarographic waves; morphine, codeine, pseudocodeine, and thebaine are not reduced. Contrary to expectation, dihydromorphinone, dihydrocodeinone, and dihydrohydroxycodeinone form waves which are attributed to reductive splitting of the O bridge. The last 3 ketones were estd. in pharmaceuticals at pH 8.8 in the Britton-Robinson buffer.

M. Hudlický

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SANTAVY, F.

24(2,4) PHASE I BOOK EXPLOITATION CZECH/2433

International Polarographic Congress. 1st, Prague, 1951

Sbornik I. Mezinarodního polarografického sjezdu. Díl 3: Hlavní referaty přednesené na sjezdu, Proceedings...Vol 3: Reviews Read at the Congress. Praha, Přírodovědecké vyd-ví [1952] 774 p. 2,000 copies printed.

Resp. Ed.: Jiří Koryta, Doctor; Chief Ed. of Publishing House: Milan Skalník, Doctor; Tech. Ed.: Oldřich Dunka.

PURPOSE: The book is intended for chemists, chemical engineers, and physicists.

COVERAGE: The book is a collection of reviews and original papers read at the International Polarographic Congress held in Prague in 1951. Uses of polarography in organic and inorganic analysis, biochemistry, medicine, and industrial chemistry are discussed. In the section, Reviews Read at the Congress, Russian and other German or English translations of each review are presented. In the section, Original Papers Read at the Congress, only those translations in Russian, German, and English which have not been published in Volume I are presented. The following scientists participated in the opening of the Congress: Professor Wiltor Komula, Dean of the Faculty of Sciences, Warsaw; Doctor Jaromír Dolanský, Minister of Planning; Professor Jaroslav Heyrovský, Chairman of the Congress; and Professor Jaroslav Pukačko, Chairman of the Center for Scientific Research and Technical Development. References follow each paper.

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Ritter, B. Polarography of Ascaridole 617

Kleinzeller, A., and Z. Fencl. Muconic Acid in Bacteria
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[English Translation] 620
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Nonek, J.J., O. Kreslynová, and R. Podlyinský. Polarography of Steroids
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Santavý, F. Polarography of Cardiac Poisons With Five-or Six-Member Lactone Rings 632

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTAVY, F.
~~DOKOUPIL, J.~~

24(2,4) PHASE I BOOK EXPLOITATION CZECH/2433

International Polarographic Congress. 1st, Prague, 1951

Sborník I. Mezinárodního polarografického sjezdu. Díl 3: Hlavní referáty přednesené na sjezdu. Proceedings...Vol 3: Reviews Read at the Congress. Praha, Přírodovědecké vyd-ví [1952]
774 p. 2,000 copies printed.

Resp. Ed.: Jiří Koryta, Doctor; Chief Ed. of Publishing House: Milan Skalník, Doctor; Tech. Ed.: Oldřich Dunka.

PURPOSE: The book is intended for chemists, chemical engineers, and physicists.

COVERAGE: The book is a collection of reviews and original papers read at the International Polarographic Congress held in Prague in 1951. Uses of polarography in organic and inorganic analysis, biochemistry, medicine, and industrial chemistry are discussed. In the section, Reviews Read at the Congress, Russian and other German or English translations of each review are presented. In the section, Original Papers Read at the Congress, only those translations in Russian, German, and English which have not been published in Volume I are presented. The following scientists participated in the opening of the Congress: Professor Viktor Kemula, Dean of the Faculty of Sciences, Warsaw; Doctor Jaromír Dolanský, Minister of Planning; Professor Jaroslav Heyrovský, Chairman of the Congress; and Professor Jaroslav Fuksa, Chairman of the Center for Scientific Research and Technical Development. References follow each paper.

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Substances of meadow saffron and their derivatives. XXX. The isolation of principles of leaves and pericarp of meadow saffron, *Colchicum autumnale* L. F. Santavý, J. Lipová, and B. Coufalík (Univ. Olomouc, Czech.). *Českoslov. farm.* 1, 239–44(1952); cf. *C.A.* 46, 9264c.— In the $CHCl_3$ ext. obtained from comed. EtOH ext. 3 substances were found by chromatography. They were substance F, m.p. 184–186°, colchicine, and substance E_1, m. 120–170° (cf. *C.A.* 44, 9618d; 46, 2152h, 4342e; 46, 1204d). Previously described substance E_2, isolated from the pericarp, was identical with E_1. Dagmar Hubíková

The alkaloid content of Datura suaveolens. Ruth Simões (Univ. São Paulo). *Anais faculdade farm. e odontol., Univ. São Paulo* 9, 185–8(1951).—Detns. of total alkaloids in leaves of *D. suaveolens* were made monthly for 24 months by the method of Albuquerque (cf. Pereira and Costa, *Anais faculdade farm. Porto* 8, (1948)). The hiosciamine content varied from 0.00 to 0.16%. No relation of the variation to the season was found. F. Fromm

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SANTAVY, F. Czechoslovakia CA: 47:12537

with J. BARTEK

Palacky Univ., Olomouc, Czech.

"Isolation of substances from the tubers of Gloriosa superba, G. rothschildiana, and G. simplex."

Pharmazie 7, 595-8 (1952).

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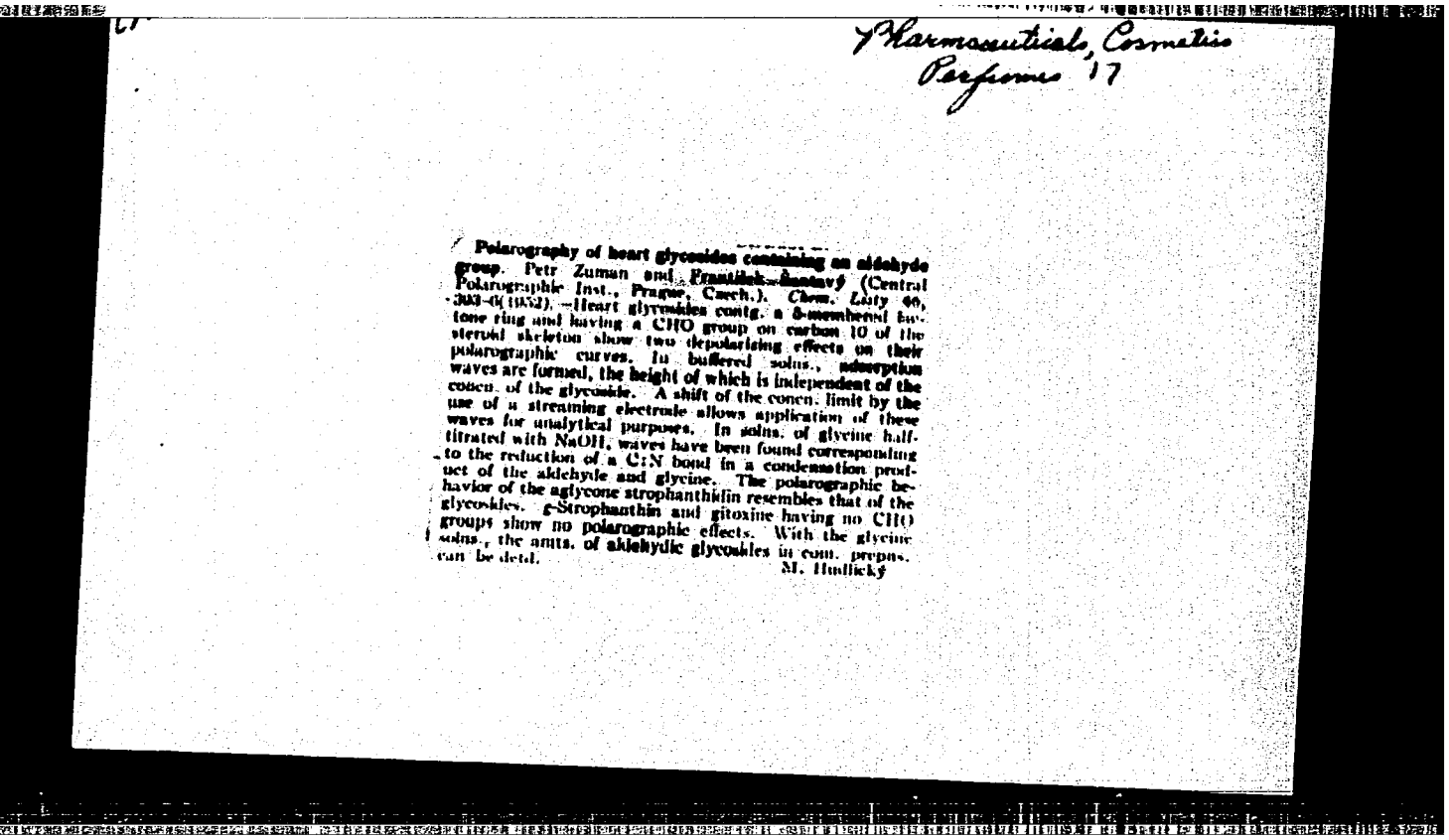

Pharmaceuticals, Cosmetics
Perfumes 17

Polarography of heart glycosides containing an aldehyde group. Petr Zuman and František Šantavý (Central Polarographic Inst., Prague, Czech.). *Chem. Listy* 46, 303-6 (1952).—Heart glycosides contg. a 5-membered lactone ring and having a CHO group on carbon 10 of the steroid skeleton show two depolarizing effects on their polarographic curves. In buffered solns., adsorption waves are formed, the height of which is independent of the concn. of the glycoside. A shift of the concn. limit by the use of a streaming electrode allows application of these waves for analytical purposes. In solns. of glycine half-titrated with NaOH, waves have been found corresponding to the reduction of a C:N bond in a condensation product of the aldehyde and glycine. The polarographic behavior of the aglycone strophanthidin resembles that of the glycosides. g-Strophanthin and gitoxine having no CHO groups show no polarographic effects. With the glycine solns., the amts. of aldehydic glycosides in com. prepns. can be detd.

M. Hudlický

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SANTAVY, F.

"Polarography in medicine, pharmacy and biochemistry." M.Brezina, P.Zuman. Reviewed by F.Santavy. Chekh.fiziol.2 no.2:231-232 '53. (MLRA 7:2)

(Polarograph and polarography) (Brezina, M.) (Zuman, P.)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

ZUMAN, P.; SANTAVY, F.

Polarography of cardiac glycosides containing aldehyde groups [with summary in English]. Sbor.Chekh.khim.rab. 18 no.1:28-35 F '53. (MLRA 7:6)

1. Central Polarographic Institute, Prague and Chemical Institute of the Medical Faculty, Palacky University, Olomouc.
(Glycosides) (Polarograph and polarography)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTAVY, F.; TALAS, M.; TELUPILOVA, O.

Colchicum extracts and its derivatives. Part 28b. Structure of the substances C and E_1 [in German with summary in Russian]. Sbor.Chekh. khim.rab. 18 no.5:710-716 O '53. (MLRA 7:6)

1. Biologicheskiy i farmakologicheskiy institut meditsinskogo fakul'teta Universiteta im. Palatskogo, Olomouts. (Alkaloids)

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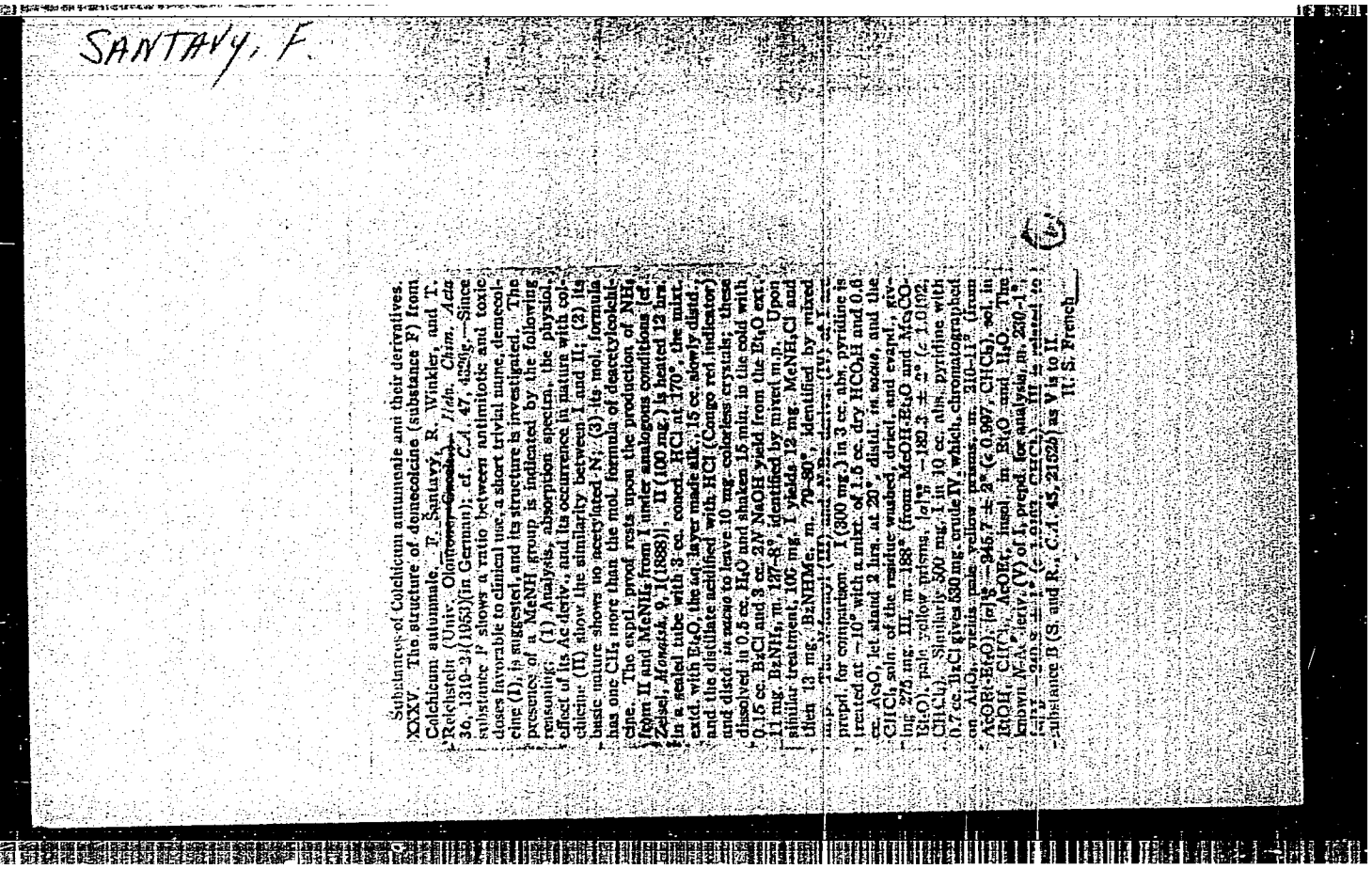

SANTAVY, F.

Substances of Colchicum autumnale and their derivatives.
XXXV. The structure of demecolcine (substance F) from Colchicum autumnale. F. Santavý, R. Winkler, and T. Reichstein (Univ. Olomouc, Czechoslovakia). *Helv. Chim. Acta* 30, 1310–31(1955)(in German); cf. *C.A.* 47, 4229g.—Since substance *F* shows a ratio between antimitotic and toxic doses favorable to clinical use, a short trivial name, demecolcine (I), is suggested, and its structure is investigated. The presence of a MeNH group is indicated by the following reasoning: (1) Analysis, absorption spectra, the physiol. effect of its Ac deriv., and its occurrence in nature with colchicine (II) show the similarity between I and II; (2) its basic nature shows no acetylated N; (3) its mol. formula has one CH_2 more than the mol. formula of deacetylcolchicine. The expd. proof rests upon the production of NH_2 from II and MeNH$_2$ from I under analogous conditions (cf. Zeisel, *Monatsh.* 9, 1(1888)). II (100 mg.) is heated 12 hrs. in a sealed tube with 3 cc. concd. HCl at 170°, the mixt. extd. with Et_2O, the aq. layer made alk. 15 cc. slowly distd. and the distillate acidified with HCl (Congo red indicator) and distd. *in vacuo* to leave 10 mg. colorless crystals; these dissolved in 0.5 cc. BzCl and 3 cc. 2*N* NaOH yield from the Et_2O ext. 11 mg. BzNHMe, m. 127–8°, identified by mixed m.p. Upon similar treatment, 106 mg. I yields 12 mg. MeNH$_2$·HCl and then 13 mg. BzNHMe, m. 79–80°, identified by mixed m.p. The hydrogen (III) and MeO determ. (IV) of I were prepd. for comparison. I (300 mg.) in 3 cc. abs. pyridine is treated at −10° with a mixt. of 1.5 cc. dry HCO_2H and 0.6 cc. Ac_2O, let stand 2 hrs. at 20°, distd. *in vacuo*, and the $CHCl_3$ soln. of the residue washed, dried, and evapd., gives 275 mg. III, m. 188° (from MeOH-Et_2O and MeCO-Et_2O), pale yellow prisms, $[\alpha]_D^{18}$ −189.3 ± 2° (*c* 1.0192; $CHCl_3$). Similarly, 300 mg. I in 10 cc. abs. pyridine with 0.7 cc. BzCl gives 630 mg. crude IV, which, chromatographed on Al_2O_3, yields pale yellow prisms, m. 310–11° (from AcOH-Et_2O), $[\alpha]_D^{18}$ −945.7 ± 2° (*c* 0.997, $CHCl_3$), sol. in BtOH, $CHCl_3$, AcOEt, insol. in Et_2O and H_2O. The known MeO deriv. (V) of I, prepd. (for analysis, m. 230–1°, $[\alpha]_D^{18}$ −240.5 ± 1.5° (*c* 1.0177, $CHCl_3$)), m. ± related to Substance B (S. and R., *C.A.* 45, 2152*i*) as V is to II.
H. S. French

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SANTAVY, F.

"Terpenes. XLVIII. Constitution of -and cadiene." Ceskoflovenska Morfologie, Praha, Vol. 47, No. 1, Jan 1953, p. 70.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

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Santavý, František

Substances of Colchicum autumnale and their derivatives. XXXII. Isolation of further compounds from the seeds of Colchicum autumnale. Františ̌ek Santavý and Miroslav Tatík (Palackého Univ., Olomouc, Czechosl.). *Chem. Listy* 47, 232–41(1953); cf. *C.A.* 47, 4320g, 12547e.—Seeds of *Colchicum autumnale* (20 kg.) were extd. with 70 l. EtOH, the evapd. ext. (3 l.) dild. to 10 l. with H_2O, extd. with ether, and the aq. layer acidified with dil. HCl, extd. with $CHCl_3$ (neutral ext.), alkalinized with NH_4OH, and extd. with $CHCl_3$ (basic ext.). From the ether ext. a fluorescent *compd.*, m. above 320°, was isolated. Chromatography of the neutral $CHCl_3$ ext. gave a *compd.* (*I*), m. 212–14°, $[\alpha]_D^{18}$ −140°, contg. a tropolone ring, sol. in $CHCl_3$ and MeOH, slightly sol. in H_2O, insol. in petr. ether. Acetylation of the chromatographic fraction after the sepn. of *I* yielded a *substance*, m. 227–9° (from Et_2O and AcOEt), (ou rapid heating, m. 231–4°), $[\alpha]_D^{18}$ −96°, sol. in $CHCl_3$, less sol. AcOEt and MeOH; slightly sol. in H_2O. Saponn. with 2.5% aq. $NaHCO_3$ in MeOH at 50° (24 hrs.) gave *compd. C* (*demethylcolchicine*), m. 232–4° (from AcOEt and Et_2O). From the basic $CHCl_3$ ext. dissolved in MeOH there crystd., after 12 hrs. at −3°, *compd. S* (probably $C_{21}H_{25}O_6N$), sol. in $CHCl_3$ and H_2O, less sol. in MeOH and Me_2CO, slightly sol. in Et_2O and AcOEt, insol. in petr. ether, m. 130–8°, $[\alpha]_D^{18}$ −110° having a tropolone ring and 4 MeO groups; *Ac deriv.*, m. 200–2°, $[\alpha]_D^{18}$ −218°. Chromatography of the mother liquors gave, beside *S*, *compd. F*, $C_{21}H_{25}O_6N$, having a tropolone ring, 4 MeO groups, m. 184–6°, $[\alpha]_D^{18}$ −122°, sol. in $CHCl_3$ and EtOH, less sol. in AcOEt, MeOH, Me_2CO, C_6H_6, and H_2O, slightly sol. in Et_2O, insol. in petr. ether. *F* forms mixed crystals with colchicine, m. 187–9°, $[\alpha]_D^{18}$ −141°, identical with the previously mentioned compd. *G* and decomp. with dil. HCl into its components. Ac. deriv. of *F*, m. 228–30°, $[\alpha]_D$ −140°. Acetylation of the mother liquors after the sepn. of *F* and *S* gave the di-Ac deriv. of *U* ($C_{21}H_{25}O_6N$), m. 224–6°, $[\alpha]_D^{18}$ −93°. Also in *Collection Czechoslov. Chem. Communs.* 19, 141–52(1954) (in German). M. Hudlický

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SANTAVY, F.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Electrochemistry

(3)

Polarographic study of cyanohydrin formation in alkaline media. P. Zuman and F. Santavý (Central Polarographic Inst., Prague, Czech.). *Chem. Listy* 47, 207–9(1953).—Reactions of the CN^- ion with 24 aromatic aldehydes in alk. media were studied polarographically. Equil. consts. of cyanohydrin formation were computed and compared with titration data from the literature. The influence of substituents and rates of formation were discussed. B. Erdös

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SANTAVY, F.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Electrochemistry

Polarography of alkaloids. XVII. Contribution to the polarography of quinine and its derivatives. J. Bartek, M. Cernoch, and F. Santavý (Palacého Univ., Olomouc (Czech.). *Chem. Listy* 47, 461–3(1953); cf. *C.A.* 46, 11582c.—In acid media, quininone is reduced in a 2-electron step, but in neutral and alk. media, a 4-electron change is noted. Quinotoxine gives a single 2-electron wave over the full pH range. Quinotoxol behaves like quinone. XVIII. Polarography and tautomerism of cotarnine and related substances. Emil Coufalík and František Santavý. *Ibid.* 1609–16.—In acidic medium, hydrastinine, cotarnine, berberine, and related substances were reduced at the quaternary double bond. In alk. medium, in addn. to the wave corresponding to the reduction of quaternary double bond, a wave corresponding to the reduction of the open, aldehydic form was found. The carbinol form (pseudobase) could be supposed to exist only in alc. KOH soln. or with large excess of alkali; it was always accompanied with the reducible aldehydic form. The ultraviolet spectra described for berberine and cotarnine in alk. medium corresponded not only to the carbinol form but also to the second tautomeric form. XIX. Polarography of chelerythrine and sanguinarine. Josef Bartek and František Santavý. *Ibid.* 1617–20.—Chelerythrine and sanguinarine gave in acid medium 2 one-electron waves; in neutral medium 1 two-electron wave. This wave corresponded to reduction at more neg. potentials than the potentials of the waves in acid medium. M. Hudlický

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SANTAVY, F.

(4)

Chemical Abst.
Vol. 48
Apr. 10, 1954
Electrochemistry

Polarography of Terramycin. O. Kratochvil, V. Malik, and F. Santavý (Palacký Univ., Olomouc, Czech.). *Chem. Listy* 47, 630-6(1953).—The polarographic behavior of Terramycin compared with that of colchicine and cinchotoxine suggests a 4-electron reduction.
M. Hudlický

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTAVY, F

Substances of Colchicum autumnale and their derivatives. XXXIV. Isolation of further substances from the flowers of Colchicum autumnale. František Santavý and Vladimír Macák (Palackého Univ., Olomouc, Czech.). *Chem. Listy* 47, 1214–23(1953); cf. *C.A.* 49, 343d, following abstr.—Extn. of 2.1 kg. *Colchicum* flowers with EtOH gave 1.63 g. of a *compd.* m. 79–83°, *apigenin*, m. 345–50° (*tri-Ac deriv.*, m. 184–6°; *tri-Bz deriv.*, m. 223–5°), and a residue which dild. with H_2O gave at pH 2–3 *colchicine*, an ether ext. contg. phenolic acids, m. 135–142°, a $CHCl_3$ ext. (I), after alkalization with NH_3 3.55 g. another $CHCl_3$ ext. (II), and after neutralization 2.3 g. of an ext. obtained by the extn. with 2:1 $CHCl_3$-EtOH (III). Ext. I gave by chromatography *colchicine* (IV), *compd.* E_1, *compd.* *D* (m. 240–3°), a *compd.* *O*, m. 254–6° [from AcOEt], $[\alpha]_D^{20}$ −114°, *compd.* *I*, m. 186–8°, and *compd.* *J* [m. 274–8° (from AcOEt and Et_2O), $[\alpha]_D^{20}$ −450°]. After acetylation of the mother liquids after the sepn. of E_1 were isolated *Ac deriv.* of E_1, m. 184–6°, a *compd.* *N*, m. 227–9° (from AcOEt), $[\alpha]_D^{20}$ −110°; refluxing with MeOH and MeONa gave a *compd.*, m. 240–5°, *Me deriv.*, (with CH_2N_2), m. 242–5°, IV, and *compd.* *B*, m. 245–7° (from AcOEt and Et_2O), $[\alpha]_D^{20}$ −167° (*acid*, by the action of MeONa, m. 224–7°, *Me ester* (with CH_2N_2), m. 174–5°). II yielded by chromatography *compd.* *E*, m. 184–6°, *compd.* *S*, m. 126–8° (from AcOH and Et_2O), $[\alpha]_D^{20}$ +120°; and, after acetylation, a *compd.*, m. 421–6° (from AcOEt and Et_2O), $[\alpha]_D^{20}$ −91° (*acetylated compd.* *C* or *U*). From 2.8 g. III sepd. 65 mg. *compd.* *M*, m. 310–14°; *Ac deriv.*, m. 302–4°; $[\alpha]_D^{20}$ −244°. M. Hudlický

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SANTAVY, FRANTISEK

Chemical Abst.
Vol. 48
Apr. 10, 1954
Organic Chemistry

(3)

Tropilidene, tropone, and tropolone. . . . Frantisek Santavy. [Palacky Univ., Olomouc, Czech.]. . . . 1534-69(1953).—A review with 270 references.
M. Hudlicky

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SANTAVY, F.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Electrochemistry

(4)

Polarography of opianic acid. Z. Holíková, V. Malá nová, and F. Santavý (Palacký Univ., Olomouc, Czech.). *Chem. Listy* 47, 1871–2(1953).—In acidic medium opianic acid forms 1 wave which degrades; in neutral solns. it forms 2 waves corresponding to the dissocd. and nondissocd. form. These waves equal at pH 7. M. Hudlický

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SANTAVÝ F. and MAŠINOVÁ V.

4429. ŠANTAVÝ F. and MAŠINOVÁ V. Chem. Úst. lék. Fak. Palackého Univ., Olomouc. * Anodicko-polarografické bílkovinné maximum. An anodic polarographic maximum caused by proteins ČAS.LÉK.ČES. 1953, 92/52 (1416-1417) Graphs 3

When a protein solution, containing Cl-ions and more than 40 mg. of protein per 100 ml., e.g. CSF, is polaregraphed on the anodic side after dilution with 0 1 N H_2SO_4, a new hitherto unknown maximum appears on the anodic wave of Cl-ions. The height of this maximum is not linearly related to the concentration of present proteins, but follows the absorption isotherm. The investigated polaregraphic maximum is caused by proteins, is of catalytic nature and is probably related to the surface phenomena. It is obtained only when the curve is registered in the direction from negative to positive potentials. In the opposite direction the maximum is not observed or is much smaller. In attempts to use the formation of the described maximum for diagnostic purposes, about 550 CSF samples were analysed and it was found that the maximum appeared in all cases where the protein concentration was elevated above a certain limit.

Heyrovský - Prague

SO: Excerpta Medica, Section II, Vol 7, No 9

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SANTAVI, F.

Analytical Abst.
May 1954
Biochemistry

(2)

1009. Polarographic micro-determination of chloride ion in biological fluids. V O. Tělupilová-Krestýnová and F. Santavý (*Mikrochim. Acta*, 1954, [1], 64–71).—All the known micro-methods for the polarographic determination of chlorides in biological fluids have been examined, and it is concluded that the original direct determination of chloride ion is the most accurate. A. J. Mee

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SANTAVY, F.

(6)

Cadmium intoxication. Vl. Mašek, M. Černoch, J. Bartek, D. Wiedermann, and F. Santavý. *Lékařské Listy* 9, 27–30(1954).—The authors believe that in intoxications of this type (and possibly other heavy metals) the body does not suffer any damage through the coupling of heavy metals with SH groups of glutathione. The heavy metals are probably combined with other groups in the human body by means of more labile coupling and therefore it is possible to carry out the detoxidation in a rather simple way, i.e. by means of cysteine or British antilewisite.

O. E. Lobstein

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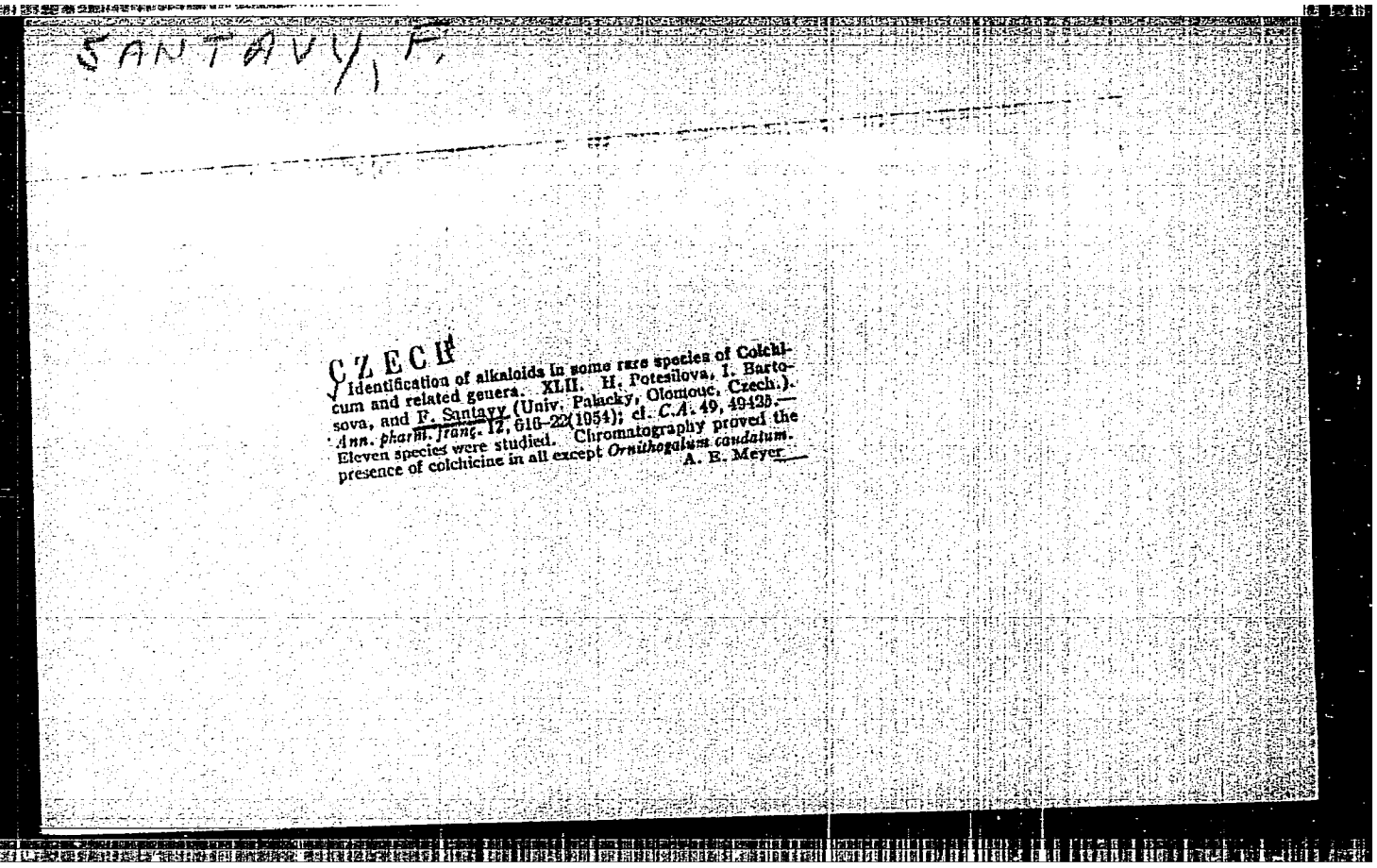

SANTAVY, F.

CZECH

Identification of alkaloids in some rare species of Colchicum and related genera. XLII. H. Potesilova, I. Bartosova, and F. Santavy (Univ. Palacky, Olomouc, Czech.). *Ann. pharm. franç.* 12, 616–22(1954); cf. *C.A.* 49, 4942i.—Eleven species were studied. Chromatography proved the presence of colchicine in all except *Ornithogalum caudatum*. A. E. Meyer

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTAVY, F.

HEROUT, V.; SANTAVY, F.

Terpenes. Part 48. Constitution of ϵ- and δ-cadinene [in English with summary in Russian]. Sbor.Chekh.khim.rab. 19 no.1:118-123 F '54. (MLRA 7:6)

1. Department of Natural Substances, Institute of Organic Chemistry, Czechoslovak Academy of Science. (Cadinene)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTAVY, F.; TALAS, M.

Colchicum compounds and their derivatives. Isolation of other substances from the seeds of autumn crocus (Colchicum autumnale L.) [in German with summary in Russian]. Sbor.Chekh.khim.rab. 19 no.1:141-152 F '54. (MLRA 7:6)

1. Khimicheskiy i farmakologicheskiy institut meditsinskogo fakul'teta Universiteta im. Palatskogo, Olomouts. (Colchicum compounds)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

ZUMAN, P.; SANTAVY, F.

Polarographic study of the cyanohydrin reaction in an alkaline medium [in German with summary in Russian]. Sbor.Chekh.khim.rab. 19 no.1:174-176 F '54. (MLRA 7:6)

1. Polarographisches Institut, Tschechoslowakische Akademie der Wissenschaften, Praha, und Institut für Chemie der medizinischen Fakultät, Olomouc. (Polarograph and polarography) (Cyanohydrin)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

KRESTYNOVA-TELUPILOVA, O.; MACAK, V.; SANTAVY, F.

Polarography of terramycin [with summary in German]. Sbor.Chekh.khim. rab. 19 no.2:234-237 Ap '54. (MLRA 7:6)

1. Khimicheskiy institut meditsinskogo fakul'teta universiteta im. Palatskogo Olomouts. (Terramycin) (Polarograph and polarography)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120015-6

SANTAVY, F.; COUFALIK, E.

"Polarography of Alkaloids. XVIII. Polarographic Investigation of the Tautomerism of Cotarnine and Related Substances. In English." p. 457, (COLLECTION OF CZECHO-SLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHEKHOSLOVATSKIKH KHIMICHESKIKH RABOT, Vol. 19, No. 3, June 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4 No. 5, May 1955, Uncl.

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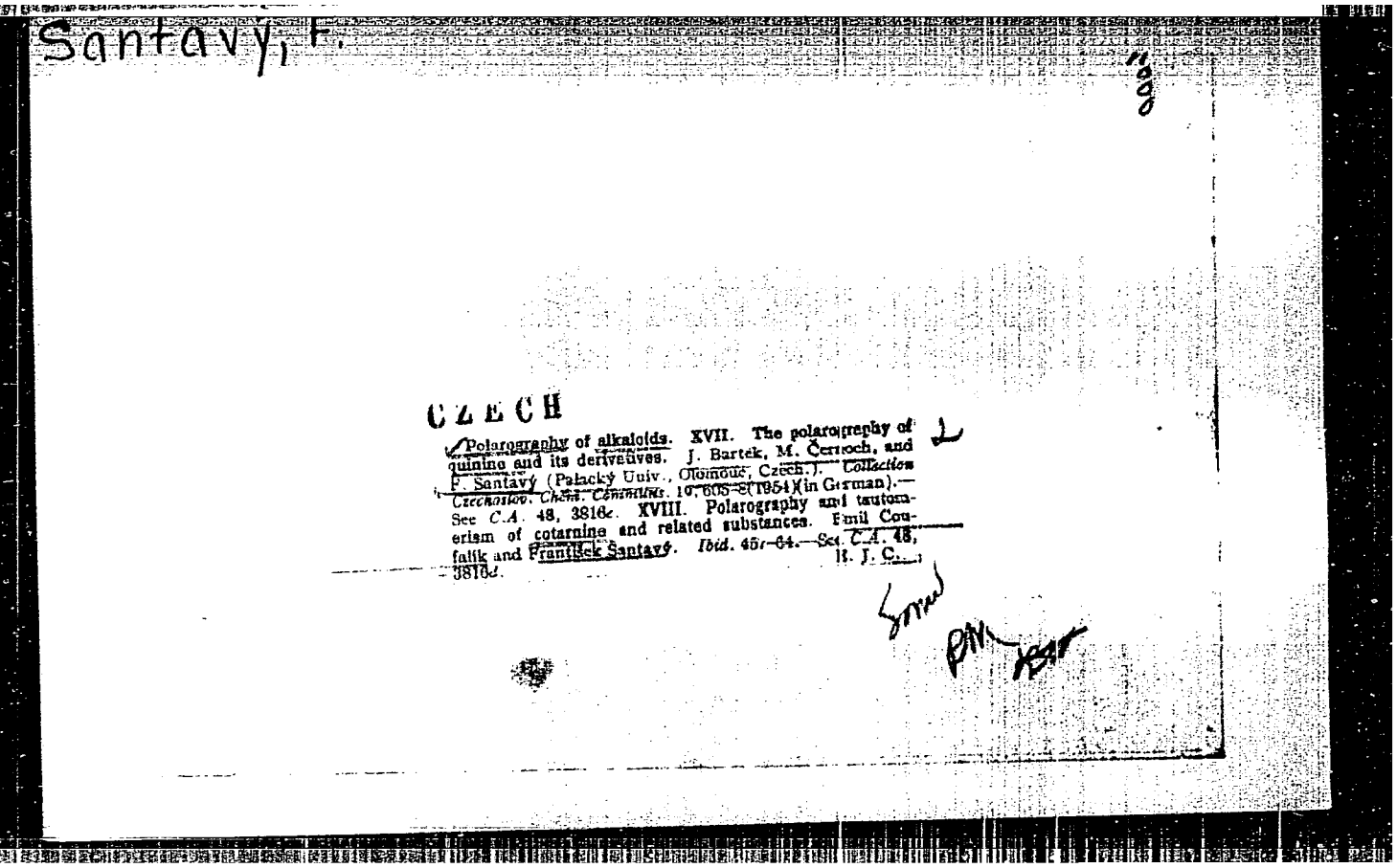

Santavy, F.

CZECH

Polarography of alkaloids. XVII. The polarography of quinine and its derivatives. J. Bartek, M. Černoch, and F. Santavý (Palacky Univ., Olomouc, Czech.). *Collection Czechoslov. Chem. Communs.* 19, 605–8 (1954) (in German).—See *C.A.* 48, 3816c. XVIII. Polarography and tautomerism of cotarnine and related substances. Emil Couerfalik and František Santavý. *Ibid.* 457–64.—See *C.A.* 48, 3816d. H. J. C.

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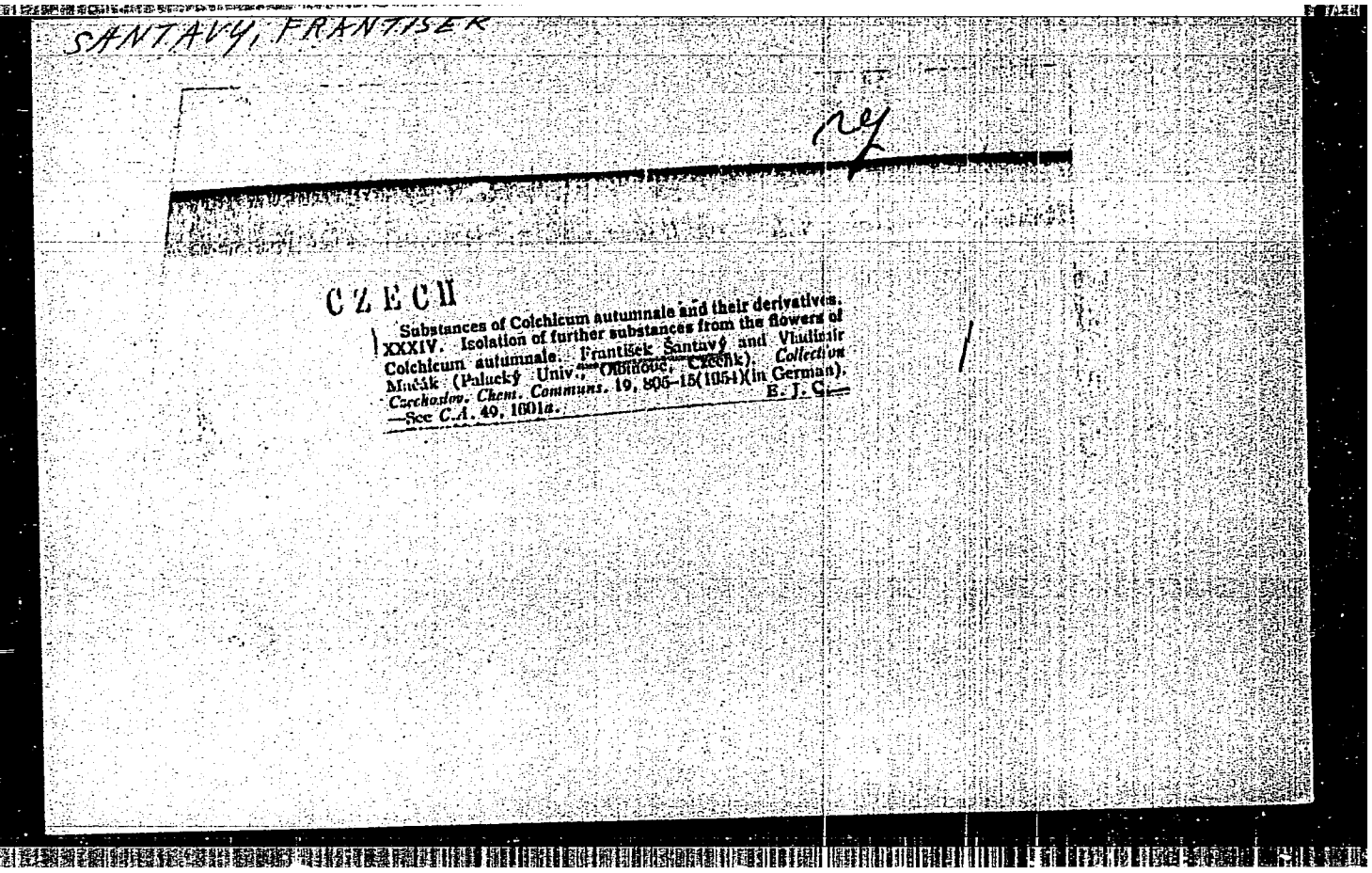

SANTAVY, FRANTISEK

CZECH

Substances of Colchicum autumnale and their derivatives. XXXIV. Isolation of further substances from the flowers of Colchicum autumnale. Frantisek Santavý and Vladimir Macák (Palacký Univ., Olomouc, Czech). *Collection Czechoslov. Chem. Communs.* 19, 895–15(1054)(in German). —See *C.A.* 49, 1001a. E. J. G.

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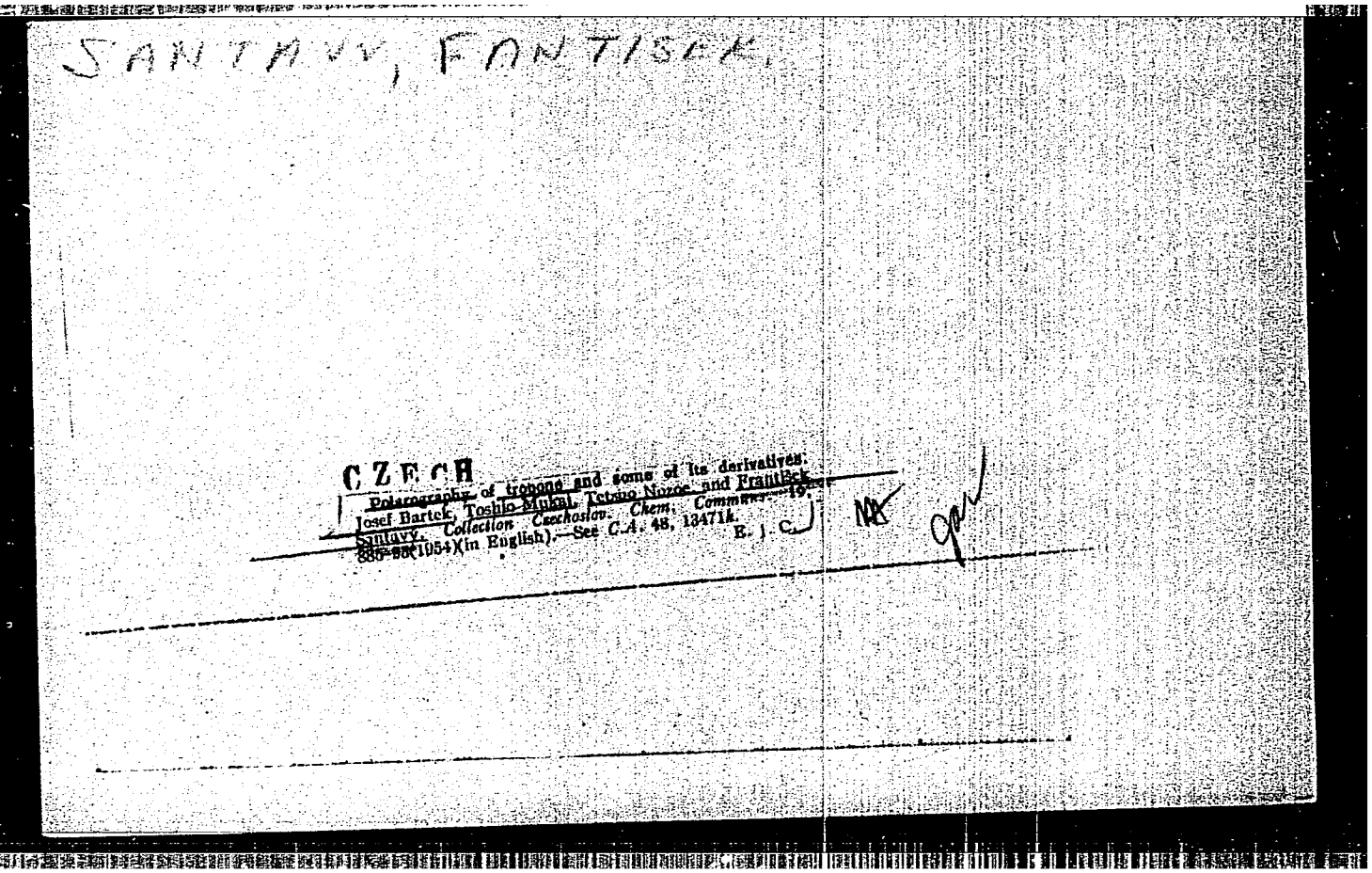

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SANTAVY, F.

CZECH

CH (4)

Substances of Colchicum autumnale and their derivatives. XXXVII. Compounds from the flowers and corms of Colchicum speciosum. Vlasta Maškova and František Santavý (Palackého Univ., Olomouc, Czech.)—Chem. Listy 48, 12–16; Collection Czechoslov. Chem. Communs. 19, 1283-8(1954)(in Russian); cf. C.A. 49, 16015.—The same compds. as in *C. autumnale* were isolated from the flowers and corms of *C. speciosum*. The technique of isolation was described in the previous communications (*loc. cit.*). Neutral phenolic $CHCl_3$ ext. from flowers contained *colchicine* (*I*), m. 154–6°, $[\alpha]_D^{18}$ −123°, and compd. *E*, m. 140/180°, $[\alpha]_D^{18}$ −130°. Basic $CHCl_3$ ext. yielded compd. *F* (*demecolcine*), m. 152–3°, and compd. *S*, m. 136–8°, $[\alpha]_D^{18}$ −124°. From the corms were isolated *I*, m. 155–7°, $[\alpha]_D^{18}$ −127°, compd. *C*, m. 140/180° ($CHCl_3$ of crystn.), compd. *S*, m. 135–8°, $[\alpha]_D^{18}$ −125°, and compd. *F*, m. 153–4°, $[\alpha]_D^{18}$ −123° [*HI salt*, m. 230–2°, $[\alpha]_D^{18}$ −150°, identical with the HI salt of compd. *F* from *C. autumnale*; *Ac deriv.*, m. 220–3°, $[\alpha]_D^{18}$ −245° ($CHCl_3$); −184° (EtOH); *Bz deriv.*, m. 210–12°, $[\alpha]_D^{18}$ −243°]. Boty deriva. are identical with those obtained from *C. autumnale*. The compd. *G* from previous expts. was sepd. by $CHCl_3$ extn. from acidic and alk. solns. into *I* and compd. *F*. XXXVIII. Isolation of further compounds from the corms of Colchicum autumnale.

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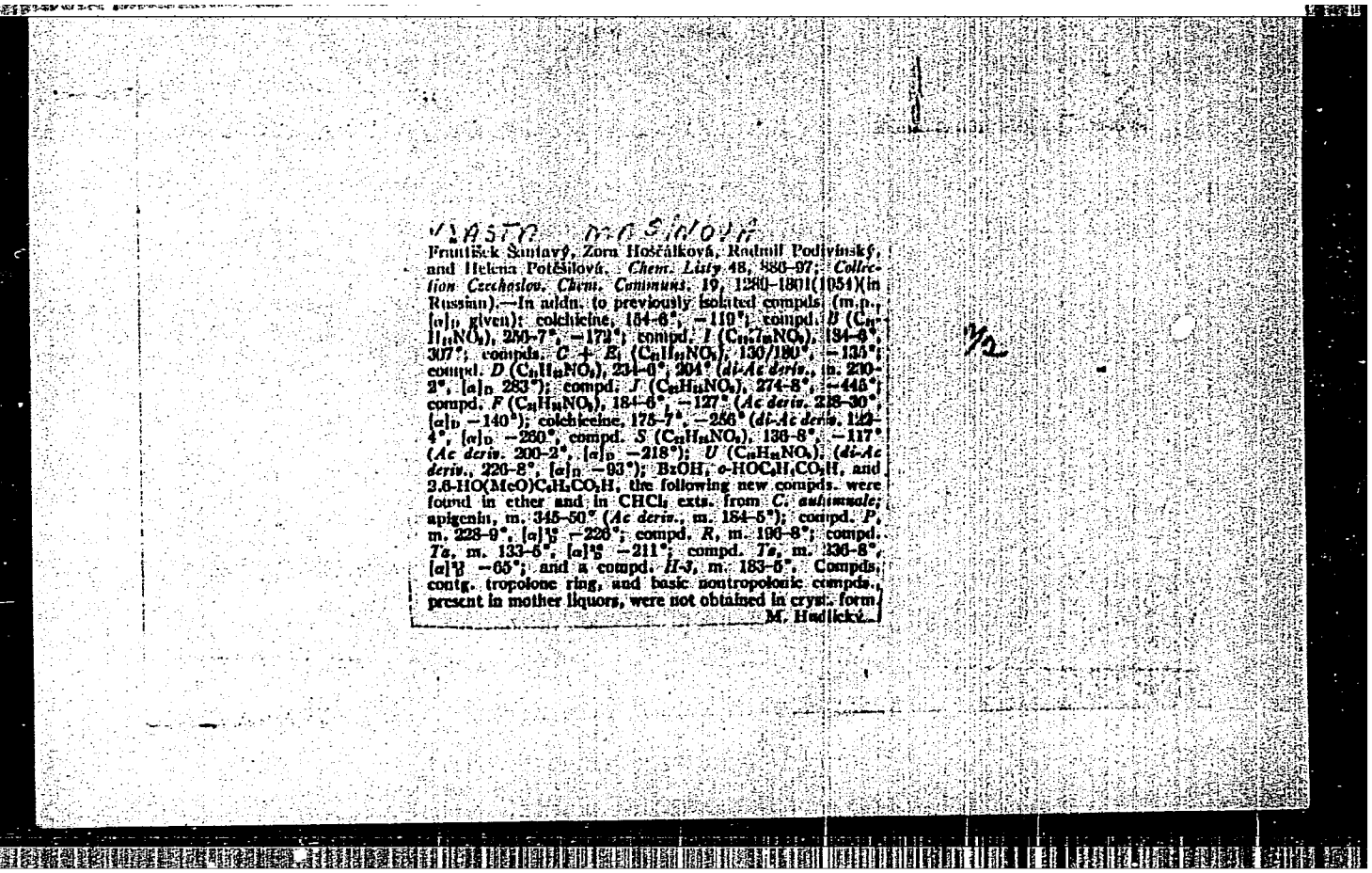

VLASTA MASINOVÁ

František Šantavý, Zora Hošťálková, Radmil Podlipinský, and Helena Potěšilová. *Chem. Listy* 48, 880–97; *Collection Czechoslov. Chem. Communs.* 19, 1280–1301(1954)(in Russian).—In addn. to previously isolated compds (m.p., $[\alpha]_D$ given): colchicine, 154–6°, −119°; compd. *B* ($C_{22}H_{23}NO_6$), 250–7°, −172°; compd. *I* ($C_{21}H_{21}NO_6$), 184–9°, 307°; compds. *C* + *E*; ($C_{21}H_{21}NO_5$), 150/180°, −135°; compd. *D* ($C_{21}H_{21}NO_5$), 234–6°, 204° (*di-Ac deriv.*, m. 210–2°, $[\alpha]_D$ 283°); compd. *J* ($C_{21}H_{21}NO_4$), 274–8°, −445°; compd. *F* ($C_{21}H_{21}NO_4$), 184–6°, −127° (*Ac deriv.* 238–30°, $[\alpha]_D$ −140°); colchicine, 175–7°, −256° (*di-Ac deriv.* 122–4°, $[\alpha]_D$ −230°, compd. *S* ($C_{21}H_{21}NO_3$), 136–8°, −117° (*Ac deriv.* 200–2°, $[\alpha]_D$ −218°); *U* ($C_{21}H_{21}NO_3$), (*di-Ac deriv.*, 226–8°, $[\alpha]_D$ −93°); BzOH, *o*-$HOC_6H_4CO_2H$, and 2,6-HO(MeO)$C_6H_3CO_2H$, the following new compds. were found in ether and in $CHCl_3$ exts. from *C. autumnale*; apigenin, m. 345–50° (*Ac deriv.*, m. 154–5°); compd. *P*, m. 228–9°, $[\alpha]_D^{25}$ −226°; compd. *R*, m. 190–8°; compd. *Ta*, m. 133–5°, $[\alpha]_D^{25}$ −211°; compd. *Tb*, m. 236–8°, $[\alpha]_D^{25}$ −65°; and a compd. *H-J*, m. 183–5°. Compds. contg. tropolone ring, and basic nontropolonic compds., present in mother liquors, were not obtained in crys. form.

M. Hudlický

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SANTAVY, F., AND OTHERS

"Substances of Colchicum Autumnale and Their Derivatives. XXXVIII. Isolation of Further Substances from the Corms of Colchicum Autumnale L.", P. 886, (CHEMICKE LISTY, Vol. 48, No. 6, June 1954, Praha, Czech.)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

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